

# TM NATIONAL TALENT SEARCH EXAMINATION

(NTSE-2016) STAGE -1 GUJARAT STATE: LCT

Date: 08/11/2015

## **SOLUTIONS**

| 1.         | Mansi wanted a doctor when she was in Primary School.                    |                                       |                            |                             |  |  |  |  |
|------------|--|---------------------------------------|----------------------------|-----------------------------|--|--|--|--|
|            | (1) became   |                                       | (3) becomes                | (4) had become              |  |  |  |  |
| Ans.       | <b>(2</b> )  |                                       |                            |                             |  |  |  |  |
| Sol.       | Here the verb want is followed by infinitive                             |                                       |                            |                             |  |  |  |  |
| <b>2</b> . | Jaydeep helps his friends  | but he not by then                    | n.                         |                             |  |  |  |  |
|            | (1) is $+$ help  | (2) does + help                       | (3) is $+$ helped          | (4) does + helped           |  |  |  |  |
| Ans.       | (3)  |                                       |                            |                             |  |  |  |  |
| Sol.       | Usage of pasive form of s  | imple present tense                   |                            |                             |  |  |  |  |
| <b>3</b> . | The next year, the Gover   | nment of Gujarat bu                   | ısiness summit at Mahatn   | na Mandir, Gandhinagar.     |  |  |  |  |
|            | (1) organize   | (2) organized                         | (3) will organize          | (4) is organized            |  |  |  |  |
| Ans.       | (3)  |                                       |                            |                             |  |  |  |  |
| Sol.       | It is showing a plan to be   | executed in future through r          | modal verb                 |                             |  |  |  |  |
| 4.         | Before we reached the ci   | nema hall, the film 'Bajaran          | gi Bhaijan'                |                             |  |  |  |  |
|            | (1) to start   | (2) started                           | (3) had started            | (4) was started             |  |  |  |  |
| Ans.       | (3)  |                                       |                            |                             |  |  |  |  |
| Sol.       | When we want to talk ab  | out an action that happened           | d before a pastevent, we o | often use the past perfect. |  |  |  |  |
| <b>5</b> . | I saw a beggar near the te   | emple. He work clot                   | hes, though it was winter  |                             |  |  |  |  |
|            | (1) tears  | (2) tearing                           | (3) torn                   | (4) to tear                 |  |  |  |  |
| Ans.       | (3)  |                                       |                            |                             |  |  |  |  |
| Sol.       |  | CRIBES THE NOUN CLOT                  |                            |                             |  |  |  |  |
| <b>6</b> . |  | ame school but Meet is cleve          |                            |                             |  |  |  |  |
|            | (1) I  | (2) my                                | (3) me                     | (4) mine                    |  |  |  |  |
| Ans.       | • • •  |                                       |                            |                             |  |  |  |  |
| Sol.       | Pronoun antecedent agre  |                                       |                            |                             |  |  |  |  |
| 7.         | Give the piural from of w  |                                       | (0)                        | (4)                         |  |  |  |  |
|            | (1) mouses   | (2) mousies                           | (3) mices                  | (4) mice                    |  |  |  |  |
| Ans.       |  | · · · · · · · · · · · · · · · · · · · |                            |                             |  |  |  |  |
| Sol.       |  | nice, irregular form of noun.         | 2                          |                             |  |  |  |  |
| <b>8</b> . |  | was a great scientist,                |                            | (1)ank h.a                  |  |  |  |  |
| A          | (1) was he   | (2) is he                             | (3) wasn't he              | (4) won't he                |  |  |  |  |
| Ans.       |  | ra form the greation to give in       | n agativa farm             |                             |  |  |  |  |
| Sol.<br>9. |  | ve form the question tag is ir        | Thegalive form             |                             |  |  |  |  |
| J.         | Amit has not a big mobil (1) has he (                                    | 2) have he                            | (3) have not he            | (4) isn't                   |  |  |  |  |
| Ans.       |  | 2, nave ne                            | (3) Have Hot He            | (1) 10111                   |  |  |  |  |
|            | • •  | ive form the auestion tag is i        | n positive form            |                             |  |  |  |  |
| Sol.       | If the question is in negative form the question tag is in positive form |                                       |                            |                             |  |  |  |  |

| 10.         | Come on India         | We want a six.   |   |  |  |
|-------------|-----------------------|--|---|--|--|
|             | (1) !                 | (2) ,  | (3) .                                   | (4) ?  |  |
| Ans.        | <b>(1)</b>            |  |   |  |  |
| Sol.        | The phrase is showing | ng a strong excitement or ch                           | eers, thus !mark is used to             | o express the emotion  |  |
| 11.         | Choose the correct is | nversion question of the follo                         | owing sentence.                         |  |  |
|             | Kiran played cricket  | yesterday.   |   |  |  |
|             | (1) Is Kiran played o | ricket yesterday?                                      | (2) Was Kiran played cricket yesterday? |  |  |
|             | (3) Dose Kiran playe  | ed cricket yesterday ?                                 | (4) Did Kiran play                      | yed cricket yesterday ?  |  |
| Ans.        | (NA)                  |  |   |  |  |
| Sol.        | The options are all w | vrong  |   |  |  |
| <b>12</b> . | India is one of       | oldest civilization in the                             | world.                                  |  |  |
|             | (1) a                 | (2) an   | (3) the                                 | (4) at   |  |
| Ans.        | (3)                   |  |   |  |  |
| Sol.        | The determiner "The   | " shows superlative degree "                           | Oldest"                                 |  |  |
| 13.         | I will stayy          | ou return.   |   |  |  |
|             | (1) either            | (2) until  | (3) or                                  | (4) after  |  |
| Ans.        | <b>(2</b> )           |  |   |  |  |
| Sol.        | The conjunction "ur   | ntil" shows a parallel action o                        | or time.                                |  |  |
| Read        | the passage and give  | the answer given below it. (                           | 14 to 17)                               |  |  |
| 14.         | fear tigers. Now the  | magician turned the dog in again, you are no better th | to a tiger. The tiger begar             | ned the cat into a dog. The dog began to<br>n to fear hunters. Once day the magician |  |
| 17.         | (1) dog               | (2) cat  | (3) car                                 | (4) bus  |  |
| Ans.        |                       | (2) cat  | (5) car                                 | ( <del>1</del> ) ous   |  |
| Sol.        | . ,                   | nce to context with the given                          | nassage                                 |  |  |
| 15.         |                       | ian turn the cat into?                                 | passage                                 |  |  |
|             | (1) rat               |  | (3) tiger                               | (4) ant  |  |
| Ans.        |                       | (=) 403  | (6) 1361                                | (1) (1)  |  |
| Sol.        | • •                   | ice to context with the given                          | passage                                 |  |  |
| 16.         | What did magician     | _  |   |  |  |
|             | (1) turned cat        | (2) mouse  | (3) tiger                               | (4) hunter   |  |
| Ans.        |                       |  |   | · ,  |  |
| Sol.        |                       | ice to context with the given                          | passage                                 |  |  |
| <b>17</b> . | Tiger was turned into |  | -                                       |  |  |
|             | (1) cat               | (2) dog  | (3) hunter                              | (4) mouse  |  |
| Ans.        | <b>(4)</b>            |  |   |  |  |
| Sol.        | According to referen  | ice to context with the given                          | passage                                 |  |  |
| 18.         | Pick odd one out.     |  |   |  |  |
|             | (1) cat               | (2) mouse  | (3) rat                                 | (4) hunter   |  |
| Ans.        | <b>(4)</b>            |  |   |  |  |
| Sol         | According to referen  | ice to context with the given                          | passage                                 |  |  |

| 19.         | As brave as a  |   |                             |                |  |  |  |
|-------------|--|---|-----------------------------|----------------|--|--|--|
|             | (1) cat  | (2) lion                                | (3) mouse                   | (4) horse      |  |  |  |
| Ans.        | <b>(2)</b>   |   |                             |                |  |  |  |
| Sol.        | According to reference to context with the given passage |   |                             |                |  |  |  |
| <b>20</b> . | As blind as  |   |                             |                |  |  |  |
|             | (1) a bee  | (2) a eagle                             | (3) a crow                  | (4) a bat      |  |  |  |
| Ans.        | <b>(4)</b>   |   |                             |                |  |  |  |
| Sol.        | According to reference to                                | context with the given passa            | ige                         |                |  |  |  |
| <b>21</b> . | Choose the correct passive                               | e form of the sentence.                 |                             |                |  |  |  |
|             | He gave me a chocolate.                                  |   |                             |                |  |  |  |
|             | (1) I was given me a choo                                | colate.                                 | (2) A chocolate is given by | me.            |  |  |  |
|             | (3) A chocolate was given                                | to me by him                            | (4) A chocolate is given by | him            |  |  |  |
| Ans.        | (3)  |   |                             |                |  |  |  |
| Sol.        | The verb is in simple past                               | form, so the passive voice w            | vould also be in same tense |                |  |  |  |
| <b>22</b> . | Choose the opposite of 'du                               | usk'                                    |                             |                |  |  |  |
|             | (1) morning  | (2) day                                 | (3) dawn                    | (4) evening    |  |  |  |
| Ans.        | (3)  |   |                             |                |  |  |  |
| Sol.        | The opposite of Dusk is D                                | awn                                     |                             |                |  |  |  |
| <b>23</b> . | Maya playing in  | the garden now.                         |                             |                |  |  |  |
|             | (1) was playing  | (2) are playing                         | (3) is playing              | (4) am playing |  |  |  |
| Ans.        | (3)  |   |                             |                |  |  |  |
| Sol.        | Signal word "now" indicat                                | es that the action is in progre         | ess                         |                |  |  |  |
| <b>24</b> . | Meena a sc   | hool bag.                               |                             |                |  |  |  |
|             | (1) have   | (2) has                                 | (3) is                      | (4) was        |  |  |  |
| Ans.        | (2)  |   |                             |                |  |  |  |
| Sol.        | The subject is singular so                               | "has". Eg. She, He, Jagdish             | - has                       |                |  |  |  |
| <b>25</b> . | Peacock is most  | beautiful bird.                         |                             |                |  |  |  |
|             | (1) a  | (2) an                                  | (3) of                      | (4) the        |  |  |  |
| Ans.        | <b>(4)</b>   |   |                             |                |  |  |  |
| Sol.        | Superlative degree is expre                              | essed by article "The"                  |                             |                |  |  |  |
| <b>26</b> . | I am waiting forh  | our.                                    |                             |                |  |  |  |
|             | (1) a  | (2) an                                  | (3) the                     | (4) since      |  |  |  |
| Ans.        | <b>(2</b> )  |   |                             |                |  |  |  |
| Sol.        |  | COUNTABLE NOUNS TAK                     | E article "an"              |                |  |  |  |
| <b>27</b> . | Change the gender of 'Poe                                |   |                             |                |  |  |  |
|             | (1) Poet   | (2) Poettess                            | (3) Pootess                 | (4) Peotiess   |  |  |  |
| Ans.        | • •  |   |                             |                |  |  |  |
|             | Feminine gender of Poet is                               |   |                             |                |  |  |  |
| <b>28</b> . | I know the person i                                      |   | 10)                         |                |  |  |  |
|             | (1) whose  | (2) whom                                | (3) when                    | (4) who        |  |  |  |
| Ans.        | • •  |   |                             |                |  |  |  |
|             | Here WHO IS SUBJCTIV                                     |   |                             |                |  |  |  |
| <b>29</b> . | If I could fly, Ito t                                    |   | (0)                         | (4)            |  |  |  |
| •           | (1) could go   | (2) would go                            | (3) go                      | (4) gone       |  |  |  |
| Ans.        | • •  | 1 1100000000000000000000000000000000000 |                             |                |  |  |  |
| Sol.        | The sentence shows desire by "SECOND Conditional"        |   |                             |                |  |  |  |

| <b>30</b> . | What do you think             | this place?                   |                             |                   |  |  |  |
|-------------|-------------------------------|-------------------------------|-----------------------------|-------------------|--|--|--|
|             | (1) on                        | (2) for                       | (3) by                      | (4) about         |  |  |  |
| Ans.        | <b>(4)</b>                    |                               |                             |                   |  |  |  |
| Sol.        | The VERB THINK IS FO          | LLOWED BY THE PREPOS          | SITION ABOUT                |                   |  |  |  |
| <b>31</b> . | Rhyming word of 'hill' is     |                               |                             |                   |  |  |  |
|             | (1) ball                      | (2) doll                      | (3) fall                    | (4) chill         |  |  |  |
| Ans.        | <b>(4)</b>                    |                               |                             |                   |  |  |  |
| Sol.        | Rhymes with Hill - Chill      |                               |                             |                   |  |  |  |
| <b>32</b> . | Plural form of the word n     | nineral is                    |                             |                   |  |  |  |
|             | (1) minerales                 | (2) minerals                  | (3) minarals                | (4) minaral's     |  |  |  |
| Ans.        | <b>(2)</b>                    |                               |                             |                   |  |  |  |
| Sol.        | Regular Plural form           |                               |                             |                   |  |  |  |
| <b>33</b> . | Add proper question tag.      |                               |                             |                   |  |  |  |
|             | Utsav passed the examin       | ation?                        |                             |                   |  |  |  |
|             | (1) wasn't he                 | (2) didn't he                 | (3) was he                  | (4) did he        |  |  |  |
| Ans.        | <b>(2)</b>                    |                               |                             |                   |  |  |  |
| Sol.        | If the question is in positiv | e form the question tag is in | negative form               |                   |  |  |  |
| <b>34</b> . | Gandhiji said, "My life is i  | my"                           |                             |                   |  |  |  |
|             | (1) massage                   | (2) message                   | (3) messge                  | (4) meseg         |  |  |  |
| Ans.        | <b>(2)</b>                    |                               |                             |                   |  |  |  |
| Sol.        | Spelling error.               |                               |                             |                   |  |  |  |
| <b>35</b> . | I have come here just         | minutes ago.                  |                             |                   |  |  |  |
|             | (1) some                      | (2) many                      | (3) a few                   | (4) much          |  |  |  |
| Ans.        | (3)                           |                               |                             |                   |  |  |  |
| Sol.        | Determiner a few is used by   | pefore countable nouns        |                             |                   |  |  |  |
| <b>36</b> . | Find out odd one from the     | e following                   |                             |                   |  |  |  |
|             | (1) mouse                     | (2) laptop                    | (3) pen                     | (4) pendrive      |  |  |  |
| Ans.        |                               |                               |                             |                   |  |  |  |
| Sol.        | Other things are name of      | -                             |                             |                   |  |  |  |
| <b>37</b> . | The cow is                    |                               |                             |                   |  |  |  |
|             | (1) domestic                  | (2) domastic                  | (3) domise                  | (4) demestic      |  |  |  |
| Ans.        | (1)                           |                               |                             |                   |  |  |  |
| Sol.        | Spelling error                |                               |                             |                   |  |  |  |
| <b>38</b> . | Mina from                     |                               |                             |                   |  |  |  |
|             | (1) buy toys                  | (2) bought toys               | (3) will be bought toys     | (4) will buy toys |  |  |  |
| Ans.        | • •                           |                               |                             |                   |  |  |  |
| Sol.        |                               | show some future action       |                             |                   |  |  |  |
| <b>39</b> . | Indian Team reached Che       |                               | (0) 11                      | (4)               |  |  |  |
| •           | (1) in                        | (2) by                        | (3) with                    | (4) on            |  |  |  |
| Ans.        | • •                           | 1:1.                          | 16 4 111                    | 1 1 •             |  |  |  |
| Sol.        | -                             | which transportation mediur   | n we used from the availabl | e choice          |  |  |  |
| <b>40</b> . | Find out the correct spelling |                               | (2) Compare                 | (4) Commerciant   |  |  |  |
| <b>A</b> =  | (1) Convineint                | (2) Convenient                | (3) Conenenint              | (4) Convanient    |  |  |  |
| Ans.        | • •                           |                               |                             |                   |  |  |  |
| 30l.        | Spelling error                |                               |                             |                   |  |  |  |

| 41.         | Choose the opposite word of 'manual'.                            |                                |                               |                                    |  |  |  |  |
|-------------|--|--------------------------------|-------------------------------|------------------------------------|--|--|--|--|
|             | (1) machenecal   | (2) michenical                 | (3) mechanical                | (4) mechinecal                     |  |  |  |  |
| Ans.        | <b>(3)</b>   |                                |                               |                                    |  |  |  |  |
| Sol.        | Spelling error   |                                |                               |                                    |  |  |  |  |
| <b>42</b> . | fine out the similar meaning of the following phrase: "Look for" |                                |                               |                                    |  |  |  |  |
|             | (1) look in  | (2) look after                 | (3) look into                 | (4) Scarch                         |  |  |  |  |
| Ans.        | <b>(4)</b>   |                                |                               |                                    |  |  |  |  |
| Sol.        | Look for means sear  | ch                             |                               |                                    |  |  |  |  |
| <b>43</b> . | Choose the past part   | ticipale form of the verb : "S | Spread"                       |                                    |  |  |  |  |
|             | (1) spreal   | (2) spreaded                   | (3) sprond                    | (4) speading                       |  |  |  |  |
| Ans.        | (NA)   |                                |                               |                                    |  |  |  |  |
| Sol.        | NA   |                                |                               |                                    |  |  |  |  |
| 44.         | water is the   | ere in the glass ?             |                               |                                    |  |  |  |  |
|             | (1) How many   | (2) How much                   | (3) How far                   | (4) How long                       |  |  |  |  |
| Ans.        | <b>(2)</b>   |                                |                               |                                    |  |  |  |  |
| Sol.        | "Howmuch" is used b  | pefore uncountable nouns t     | o know the quantity           |                                    |  |  |  |  |
| <b>45</b> . | We use sola  | ar energy in our daily life.   |                               |                                    |  |  |  |  |
|             | (1) must   | (2) should                     | (3) would                     | (4) could                          |  |  |  |  |
| Ans.        | <b>(2)</b>   |                                |                               |                                    |  |  |  |  |
| Sol.        | Modal "should" is use  | ed to show obligation / mor    | al duty                       |                                    |  |  |  |  |
| <b>46</b> . | Virat Kohali has been  | n batting early mori           | ning.                         |                                    |  |  |  |  |
|             | (1) for  | (2) from                       | (3) since                     | (4) during                         |  |  |  |  |
| Ans.        | (3)  |                                |                               |                                    |  |  |  |  |
| Sol.        | Since is a preposition   | n which is used to indicate t  | the point of time             |                                    |  |  |  |  |
| <b>47</b> . | The teacher distribut  | ted the chocolates             | children.                     |                                    |  |  |  |  |
|             | (1) between  | (2) arnong                     | (3) each other                | (4) both                           |  |  |  |  |
| Ans.        | <b>(2</b> )  |                                |                               |                                    |  |  |  |  |
| Sol.        | Between is used for a  | choices involving two items    | and "among" for choices that  | involve more than two items.       |  |  |  |  |
| <b>48</b> . | captain pla  | ayed well. India lost the ma   | atch.                         |                                    |  |  |  |  |
|             | (1) If   | (2) Unless                     | (3) Though                    | (4) Because                        |  |  |  |  |
| Ans.        | <b>(3)</b>   |                                |                               |                                    |  |  |  |  |
| Sol.        | Though, Although, E  | But, Yet, Still shows two con  | tradiction in sentences combi | ned                                |  |  |  |  |
| <b>49</b> . | Rohit is not   | _clever as Manisha.            |                               |                                    |  |  |  |  |
|             | (1) As   | (2) The                        | (3) So                        | (4) Than                           |  |  |  |  |
| Ans.        | (1,3)  |                                |                               |                                    |  |  |  |  |
| Sol.        | In Positive degree w similar.                                    | e use as As or so              | as to compare two or mor      | re than two things which are equal |  |  |  |  |
| <b>50</b> . | Gandhiji believed in   | ·                              |                               |                                    |  |  |  |  |
|             |  | (2) violence                   | (3) non - violence            | (4) non - violence                 |  |  |  |  |
| Ans.        | (3,4)  |                                |                               |                                    |  |  |  |  |
| Sol.        | Spelling errors  |                                |                               |                                    |  |  |  |  |



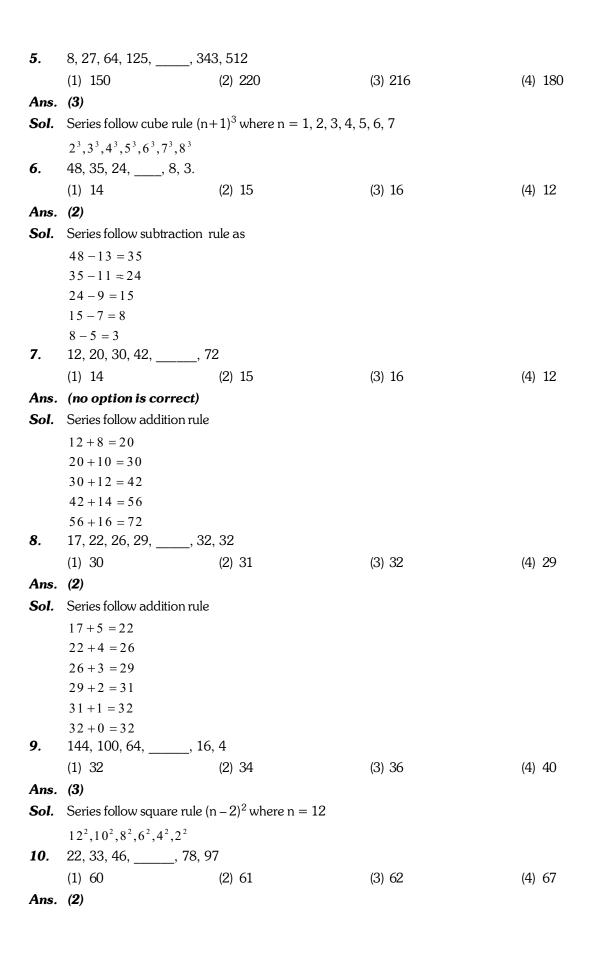
# TM NATIONAL TALENT SEARCH EXAMINATION

(NTSE-2016) STAGE -1 GUJARAT STATE: MAT

Date: 08/11/2015

7 - 7 = 0

| Max        | . Marks: 50                         | SOLU                           | TIONS                         | Time allowed: 45 mins  |
|------------|-------------------------------------|--------------------------------|-------------------------------|--|
| term i     | n the series is missing as s        |                                | n is given as one of the alte | ne principles understanding it. One rnative amongst the four numbers ne anwer sheet. |
| 1.         | 1, 12, 18, 25,, 52                  |                                |                               |  |
|            | (1) 32                              | (2) 33                         | (3) 35                        | (4) 34   |
| Ans.       | (3)                                 |                                |                               |  |
| Sol.       | Given series is combination         | on of two series               |                               |  |
|            | I:1,18,?                            |                                |                               |  |
|            | II: 12, 25, 52                      |                                |                               |  |
|            | Rule in II series is                | Rule in series I is            |                               |  |
|            | $12 \times 2 + 1 = 25$              | 1 + 17 = 18                    |                               |  |
|            | $25 \times 2 + 2 = 52$              | 18 + 17 = 35                   |                               |  |
| <b>2</b> . | 9, 16, 25, 36,, 64                  | , 81                           |                               |  |
|            | (1) 40                              | (2) 42                         | (3) 46                        | (4) 49   |
| Ans.       | <b>(4)</b>                          |                                |                               |  |
| Sol.       | Series follow square rule           | $(n+1)^2$ where $n = 2, 3, 4,$ | 5, 6, 7, 8                    |  |
|            | $3^2, 4^2, 5^2, 6^2, 7^2, 8^2, 9^2$ |                                |                               |  |
| <b>3</b> . | 2, 2, 4, 12, 48,                    |                                |                               |  |
|            | (1) 240                             | (2) 220                        | (3) 192                       | (4) 200  |
| Ans.       | <b>(1)</b>                          |                                |                               |  |
| Sol.       | Series follow multiplication        | on rule                        |                               |  |
|            | $2 \times 1 = 2$                    |                                |                               |  |
|            | $2 \times 2 = 4$                    |                                |                               |  |
|            | $4\times3=12$                       |                                |                               |  |
|            | $12 \times 4 = 48$                  |                                |                               |  |
|            | $48\times5=240$                     |                                |                               |  |
| 4.         | 25, 22, 18, 13, 7,                  | ·                              |                               |  |
|            | (1) 1                               | (2) 2                          | (3) 3                         | (4) 0  |
| Ans.       | <b>(4)</b>                          |                                |                               |  |
| Sol.       | Series follow subtraction           | rule as                        |                               |  |
|            | 25 - 3 = 22                         |                                |                               |  |
|            | 22 - 4 = 18                         |                                |                               |  |
|            | 18 - 5 = 13                         |                                |                               |  |
|            | 13 - 6 - 7                          |                                |                               |  |



**Sol.** Series follow addition rule

$$22 + 11 = 33$$

$$33 + 13 = 46$$

$$46 + 15 = 61$$

$$61 + 17 = 78$$

$$78 + 19 = 97$$

In question 11 to 15, English alphabates are given digital numbers. Using them, find the correct code of other English words from the alternatives.

**11.** If TAKE = 3456, KAML = 5479 are given, what is writeen for MAKE

(4) 7564

Ans. (2)

**Sol.** T = 3, A = 4, K = 5, E = 6 and K = 5, A = 4, M = 7, L = 6

**12.** If DOG = 467, CAT = 321 are given, what is written for GOT?

(4) 617

Ans. (2)

**Sol.** D = 4, O = 6, G = 7 and C = 3, A = 2, T = 1

So, 
$$GOT = 761$$

**13.** If A = 1, B = 2, C = 3, D = 4, E = 5, F = 6, G = 7, H = 8, I = 9 and BCGH = 2378 are given, what is given to CDHI = ?

$$(2)$$
 3849

(4) 3894

Ans. (3)

**Sol.** A = 1, B = 2, C = 3, D = 4, E = 5, F = 6, G = 7, H = 8 .......

So, CDHI = 3489

**14.** If CAMEL = 34567, METAL = 56847, what is LEMAT?

- (1) 76584
- (2) 76458
- (3) 76548

(4) 76854

Ans. (3)

**Sol.** C = 3, A = 4, M = 5, E = 6, L = 7 and M = 5, E = 6, T = 8, A = 4, L = 7

So, LEMAT = 76548

**15.** If HIDE = 8945, BDAF = 2416, what is DIBF?

- (1) 4962
- (2) 4692
- (3) 4296

(4) 4926

Ans. (4)

**Sol.** H = 8, I = 9, D = 4, E = 5 and B = 2, D = 4, A = 1, F = 6

So, DIBF 
$$= 4926$$

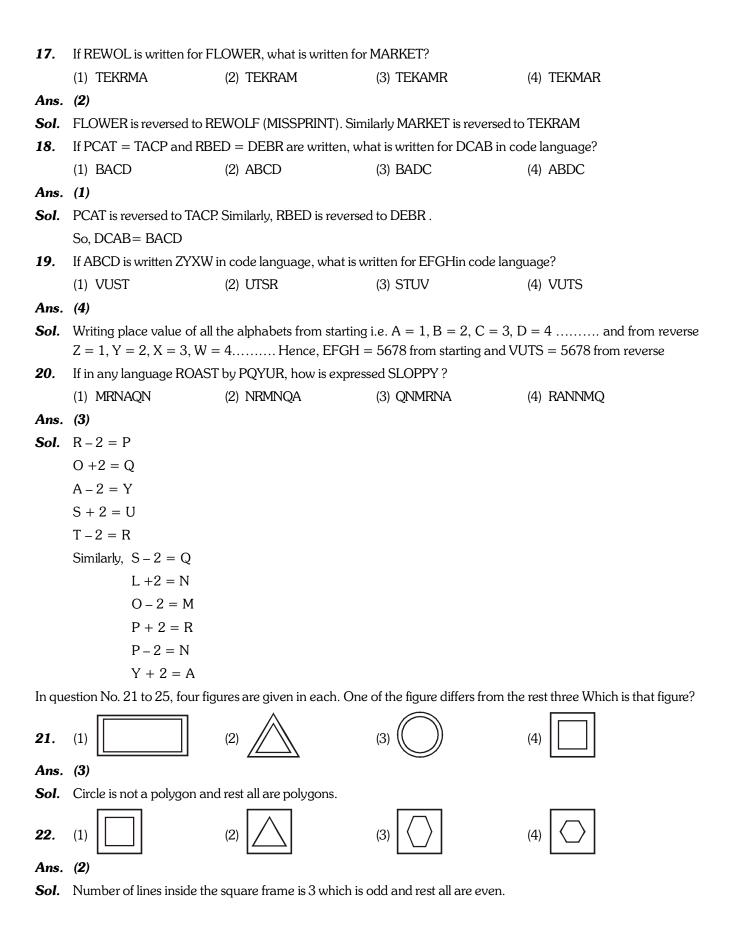
In question No. 16 to 20, if order of English alphabet is changed, code language id changed.

16. If POUND is written instead of DNUOP, what is written for MEGIK?

- (1) KIMEG
- (2) KIGEM
- (3) KGIEM
- (4) KIGEM

Ans. (2,4)

**Sol.** If letters of POUND are reversed it forms the code as DNUOP. Similarly letters of MEGIK are reversed as KIGEM







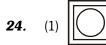






Ans. (4)

**Sol.** No figure is given.









Ans. (2)

**Sol.** Same figure is embedded. While different figures is embedded in rest.

**25**. (1)



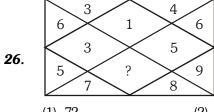




#### Ans. (4)

**Sol.** Curve inside the triangle is not touching the edge of triangle.

In question No 26 to 30, figures are given with one question mark (?). Complete the figure logically.



(1) 72

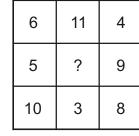
(2) 35

(3) 56

(4) 42

#### Ans. (?)

**Sol.** No option is correct.



(1) 2

(2) 1

(3) 7

(4) 12

#### Ans. (3)

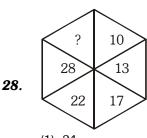
**27**.

**Sol.** Sum of each row should be 21

In row 2,

$$(5 + X + 9) = 21$$

$$X = 21 - 14 = 7$$



(1) 34

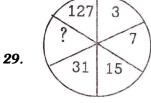
(2) 35

(3) 30

(4) 36

Ans. (2)

**Sol.** 10 + 3 = 13; 13 + 4 = 17; 17 + 5 = 22; 22 + 6 = 28; 28 + 7 = 35



(1) 62

(2) 63

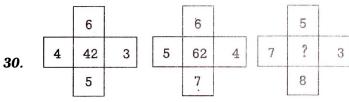
(3) 106

(4) 76

Ans. (2)

**Sol.** Starting from 3 every succeeding number is obtained by using pattern ( $\times$  2 + 1).

$$3 \times 2 + 1 = 7$$
;  $7 \times 2 + 1 = 15$ ..... so on



(1) 65

(2) 60

(3) 61

(4) 62

Ans. (3)

**Sol.**  $(6 \times 5) + (4 \times 3) = 42$ 

$$(6 \times 7) + (4 \times 5) = 62$$

$$(5 \times 8) + (7 \times 3) = 62$$





In figure, if at the bottom of the quibic, there are four dots, how many dots can be at the top?

(1) 2

(2) 4

(3) 6

(4) 3

Ans. (3)

**31**.

**Sol.** According to unfolding net

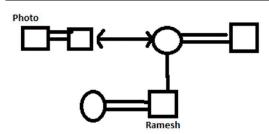
|   | 1 |   |
|---|---|---|
| 2 | 4 | 3 |
|   | 5 |   |
|   | 6 |   |

Opposite to 4(Top) is 6(Bottom)

- **32.** Pointing at the photo, Ramesh said that is the photo of the younger brother of father's daughter's of the only sister of my maternal uncle. What relation of the person in the photo with Ramesh?
  - (1) Maternal uncle
- (2) Father
- (3) Uncle
- (4) Brother

Sol.

| REPRESENTATION | RELATION                                      |
|----------------|---|
| □₩             | Spouse relation                               |
| $\Rightarrow$  | sibling relation                              |
| 0              | females                                       |
|                | males   |
| 0              | parent at top and child<br>at bottom relation |

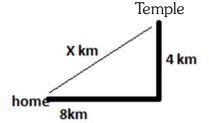


So the person in photo is Uncle of Ramesh.

- **33.** Tarun went 8 kms in the East from his house. Then turned to left and went to the temple which is 4 kms away. Now to reach his home (without taking turn)) how much distance would he walk?
  - (1) 5 (km)
- (2) 3 (km)
- (3) 8 (km)
- (4) 6 (km)

Ans. (3)

Sol.



By Pythagoras theorem,

$$8^2 + 4^2 = X^2$$

$$X = \sqrt{(64+16)} = \sqrt{80} = 4\sqrt{5}$$

X = 8 km (approx).

- **34.** Kiran was standing on the way after sunrise. Narmrata who was coming from the opposite direction, saw that the shadow od Kiran was falling on his left. So to which direction was Kiran's face? (Kiran was looking)
  - (1) South
- (2) South-West
- (3) North-West
- (4) North

Ans. (1)

**Sol.** Kiran was facing south direction.

| <b>35</b> . | A wall clock shows 3,40   | tima What tima is indicated  | d reflection of the same clas            | on the appacite close?          |
|-------------|---|--|--|---------------------------------|
| 33.         | (1) 7:20  | time. What time is indicated (2) 8:40  | (3) 8:20                                 | (4) 7:40                        |
| Ans.        | , ,   | (2) 6:40   | (3) 6:20                                 | (4) 7:40                        |
| Sol.        | • •   | n correct watch subtract thi   | s time from 11:60 to get ref             | laction of 3:10 i.a             |
| 301.        | (11:60 - 3:40) = 8:20.  | in conect water subtract till  | s time from 11.00 to get ref             | lection of 3.40 i.e.            |
| <b>36</b> . | ,   | annles = 4 hananas So ins  | tead of huving 3 manages                 | hoe many bananas are available? |
| <i>50.</i>  | (1) 6 bananas   | (2) 8 bananas  | (3) 9 bananas                            | (4) 12 bananas                  |
| Ans.        |   | (2) Odmanas  | (O) 9 Gariarias                          | (+) 12 bananas                  |
| Sol.        | • •   | = 3 apples; 2 apples = 4 ba  | ananas                                   |                                 |
| 001.        | Therefore, $1 \text{ apple} = 2 \text{ b}$  |  | ariarias.                                |                                 |
|             | So, $2 \text{ mangoes} = 6 \text{ band}$  |  |  |                                 |
|             |   |  |  |                                 |
|             | So, 3 mangoes = $\frac{(6 \times 3)}{2}$  | $\frac{1}{2} = 9$ bananas.   |  |                                 |
| <b>37</b> . | If on 27 January 1947, it   | t was Wednesday, what day  | was on 3 September 1947                  |                                 |
|             | (1) Wednesday   | (2) Thursday   | (3) Friday                               | (4) Sunday                      |
| Ans.        | (3)   |  |  |                                 |
| Sol.        | 27 Jan 1947 is Wednesda   | ay.  |  |                                 |
|             | 3 September 1947 = ?  |  |  |                                 |
|             |   | Jan Feb March Ap   | ril May June July Aug                    | Sept                            |
|             | No. of odd days $\rightarrow$   | 4 + 0 + 3 + 2  | 2 + 3 + 2 + 3 + 3                        | +3 = 23  days = 2  odd days     |
|             | So, Wednesday $+2 = Fri$  | day.   |  |                                 |
| <b>38</b> . | Goldmith : Ornamentsi :   | : Producer : ?   |  |                                 |
|             | (1) Film  | (2) Theater  | (3) Actor                                | (4) Actress                     |
| Ans.        | <b>(1)</b>  |  |  |                                 |
| Sol.        |   | nents. Similarly, Producer m   |  |                                 |
| <b>39</b> . |   | August. If Mahesh is 17 yea  |  |                                 |
|             | (1) Tuesday   | (2) Monday   | (3) Wednesday                            | (4) Monday                      |
| Ans.        | <b>(4)</b>  |  |  |                                 |
| 0 1         |   | F A  |  |                                 |
| Sol.        | Birth date of Satish $\rightarrow 1$  |  |  |                                 |
| Sol.        | Birth date of Satish $\rightarrow 1$<br>Mahesh is 17 days older   | than Satish  |  |                                 |
| Sol.        | Birth date of Satish $\rightarrow 1$<br>Mahesh is 17 days older<br>$\therefore$ 17 days means 3 odd   | than Satish<br>days.   |  |                                 |
|             | Birth date of Satish → 1 Mahesh is 17 days older ∴ 17 days means 3 odd ∴ Mahesh was born on (   | than Satish<br>days.<br>(Wednesday – 3) = Sunday.  |  | and minute hand) 2              |
| Sol.<br>40. | Birth date of Satish →1 Mahesh is 17 days older ∴ 17 days means 3 odd ∴ Mahesh was born on ( At 3.00 o'clock, which of  | than Satish<br>days.<br>(Wednesday – 3) = Sunday.<br>The following angle is made                             | the two hands (hour hand                 |                                 |
| 40.         | Birth date of Satish → 1 Mahesh is 17 days older ∴ 17 days means 3 odd ∴ Mahesh was born on ( At 3.00 o'clock, which of (1) 90°   | than Satish<br>days.<br>(Wednesday – 3) = Sunday.  |  | and minute hand) ?<br>(4) 150°  |
| 40.<br>Ans. | Birth date of Satish $\rightarrow$ 1 Mahesh is 17 days older $\therefore$ 17 days means 3 odd $\therefore$ Mahesh was born on (At 3.00 o'clock, which of (1) 90° (1)  | than Satish<br>days.<br>(Wednesday – 3) = Sunday.<br>If the following angle is made<br>(2) 120°              | the two hands (hour hand $(3)  0^\circ$  |                                 |
| 40.         | Birth date of Satish → 1 Mahesh is 17 days older ∴ 17 days means 3 odd ∴ Mahesh was born on ( At 3.00 o'clock, which of (1) 90° (1) At 3:00 hands of clock  | than Satish<br>days.<br>(Wednesday – 3) = Sunday.<br>The following angle is made                             | the two hands (hour hand $(3)  0^\circ$  |                                 |
| 40.<br>Ans. | Birth date of Satish → 1 Mahesh is 17 days older ∴ 17 days means 3 odd ∴ Mahesh was born on ( At 3.00 o'clock, which of (1) 90° (1) At 3:00 hands of clock ∴ 1 min space = 6°   | than Satish days. (Wednesday – 3) = Sunday. The following angle is made (2) 120°  are 15 minutes spaces apar | the two hands (hour hand $(3)  0^\circ$  |                                 |
| 40.<br>Ans. | Birth date of Satish $\rightarrow$ 1 Mahesh is 17 days older $\therefore$ 17 days means 3 odd $\therefore$ Mahesh was born on ( At 3.00 o'clock, which of (1) 90° (1) At 3:00 hands of clock $\therefore$ 1 min space = 6° $\therefore$ 15 min space = 15 × | than Satish days. (Wednesday – 3) = Sunday. The following angle is made (2) 120°  are 15 minutes spaces apar | the two hands (hour hand<br>(3) 0°<br>t. | (4) 150°                        |

| Ans.        | (2)   |  |   |   |  |  |  |  |  |
|-------------|---|--|---|---|--|--|--|--|--|
| Sol.        | ` ,   | of clock are 10 minutes spa  | aces apart.                                 |   |  |  |  |  |  |
|             | $\therefore 1 \text{ min space} = 6^{\circ}$  |  |   |   |  |  |  |  |  |
|             | <del>-</del>  | $\therefore 10 \text{ min space} = 10 \times 6^{\circ} = 60^{\circ}$ |   |   |  |  |  |  |  |
| <b>42</b> . | If the day before yesterday was Sunday, what day will be on the 5 <sup>th</sup> day after day after tomorrow? |  |   |   |  |  |  |  |  |
|             | (1) Sunday  | (2) Saturday   | (3) Wednesday                               | (4) Thursday                            |  |  |  |  |  |
| Ans.        | <b>(2</b> )   |  |   |   |  |  |  |  |  |
| Sol.        | Day after yesterday i   | s today i.e. Sunday, so fifth  | n day from day after tomorrov               | v is saturday.                          |  |  |  |  |  |
| In que      | estion No. 43, 44 and   | 15, one word differs from t  | the rest. Which one is that?                |   |  |  |  |  |  |
| <b>43</b> . | (1) Acre  | (2) Inch   | (3) Meter                                   | (4) Mile                                |  |  |  |  |  |
| Ans.        | <b>(1)</b>  |  |   |   |  |  |  |  |  |
| Sol.        | Acres is measuring u  | nit of Area while others are   | measuring unit of length.                   |   |  |  |  |  |  |
| 44.         | (1) Banas   | (2) Saraswati  | (3) Rupen                                   | (4) Sabarmati                           |  |  |  |  |  |
| Ans.        | <b>(4)</b>  |  |   |   |  |  |  |  |  |
| Sol.        | Sabarmati is the only   | river which merges in oce  | an, while all others are not.               |   |  |  |  |  |  |
| <b>45</b> . | Three cities of the fol   | lowing are of one group. W   | Vhich city differs from that gro            | oup?                                    |  |  |  |  |  |
|             | (1) Ahmedabad   | (2) Jaypur   | (3) Bhopal                                  | (4) Lucknow                             |  |  |  |  |  |
| Ans.        | <b>(1)</b>  |  |   |   |  |  |  |  |  |
| Sol.        | Ahmadabad is not th   | ne capital city while all othe                                       | er are capital cities.                      |   |  |  |  |  |  |
| 46.         | There is relation betw<br>Asham?  | een Gujarat and Gandhina   | gar. Which of the following wo              | ords has the same type of relation with |  |  |  |  |  |
|             | (1) Gauhati   | (2) Manipur  | (3) Dispur                                  | (4) Mizoram                             |  |  |  |  |  |
| Ans.        | (3)   |  |   |   |  |  |  |  |  |
| Sol.        | Gujarat's Capital is G  | Sandhinagar.   |   |   |  |  |  |  |  |
|             | ∴ Assam's Capital is  |  |   |   |  |  |  |  |  |
| <b>47</b> . | In a line, Parth's sequence line?   | ence is $17^{ m th}$ from right side                                 | and 24 <sup>th</sup> from the left side. So | how many students are there in that     |  |  |  |  |  |
|             | (1) 41  | (2) 40   | (3) 42                                      | (4) 39                                  |  |  |  |  |  |
| Ans.        | <b>(2)</b>  | 16   |   |   |  |  |  |  |  |
| Sol.        | $\leftarrow$ 23 + F   | $Parth + \frac{16}{} \Rightarrow =$                                  | = 23 + 1 + 16 = 40                          |   |  |  |  |  |  |
| <b>48</b> . | 20% of 20% of a nur   | mber is 20. What is that nu  | mber?                                       |   |  |  |  |  |  |
|             | (1) 200   | (2) 400  | (3) 500                                     | (4) 2000                                |  |  |  |  |  |
| Ans.        | (3)   |  |   |   |  |  |  |  |  |
| Sol.        | $\frac{20}{100} \times \frac{20}{100} \times x = 20$  |  |   |   |  |  |  |  |  |
|             | ∴ $x = 500$ .   |  |   |   |  |  |  |  |  |
| <b>49</b> . | If 'City' is called 'Villa  | age', 'Village' is called 'Sofa'                                     | and 'Sofa' is 'Bathroom', that              | n where does lion live?                 |  |  |  |  |  |
|             | (1) ina Jungle  | (2) In a Sofa  | (3) In a bathroom                           | (4) In a village                        |  |  |  |  |  |
| Ans.        | <b>(2)</b>  |  |   |   |  |  |  |  |  |

**Sol.** According to the code given, Lion lives in village and village is called Sofa.

- **50.** The addition of the squares of two numbers in squares is 221. Which are those numbers?
  - (1) 100 and 111
- (2) 9 and 10
- (3) 10 and 11
- (4) 11 and 12

**Sol.** 
$$x^2 + y^2 = 121$$

$$(10)^2 + (11)^2 = 121$$

$$100 + 121 = 221$$

 $\therefore$  10 and 11 are the number.

## NATIONAL TALENT SEARCH EXAMINATION (NTSE-2016) STAGE -1

**GUJARAT STATE: SAT** 

Date: 08/11/2015

### **SOLUTIONS**

Max. Marks: 100 Time allowed: 90 mins Which the smallest number that devises 1512 is the complete the cube? (2) 6(3) 7(4) 9Ans. (3) **Sol.** Prime factorization of 1512 is

| 2 | 1512 |
|---|------|
| 2 | 756  |
| 2 | 378  |
| 3 | 189  |
| 3 | 63   |
| 3 | 21   |
| 7 | 7    |
|   | 1    |

To make 1512 a perfect cube it should be divided by 7.

Which number is the inverse of the opposite of  $-\frac{5}{8}$ ? 2.

(1) 
$$\frac{5}{8}$$
 (2)  $1\frac{3}{5}$  (3) 2

(2) 
$$1\frac{3}{5}$$

(3) 
$$2\frac{2}{5}$$

(4) 
$$-\frac{8}{5}$$

**Sol.** Opposite of  $-\frac{5}{8}$  is  $\frac{5}{8}$ , and inverse of  $\frac{5}{8}$  is  $\frac{8}{5}$  which can also be written as  $1\frac{3}{5}$ .

What is the value of  $(a^{10})^3 \div (a^6)^5$ ? 3.

(2) 
$$a^2$$

(4) 
$$\frac{1}{a}$$

Ans. (3)

**Sol.** 
$$\frac{\left(a^{10}\right)^3}{\left(a^6\right)^5} = \frac{a^{30}}{a^{30}} = a^{30-30} = a^0 = 1$$

**4.** If 
$$x = x = \sqrt[4]{16} + \sqrt[4]{625}$$
, then what is  $x = ?$ 

$$(2)$$
 29

$$(4)$$
 5

Ans. (1)

**Sol.** 
$$x = \sqrt[4]{16} + \sqrt[4]{625}$$
  
 $x = \sqrt[4]{2^4} + \sqrt[4]{5^4}$   
 $x = 2 + 5$ 

What is the coefficient of  $(x + y)^4$  in the expansion of  $x^2y^2$ ? **5**.

$$(4)$$
 6

#### Ans. (4)

**Sol.** Expansion of  $(x + y)^4$  is

$$(x + y)^4 = x^4 + 4x^3y + 6x^2y^2 + 4xy^3 + y^4$$

Hence co-efficient of  $x^2y^2$  is 6.

6. The proportion of the angles of quadratic is 2: 5: 7: 4. What type of quadratic is that?

Ans. (2)

**Sol.** Let the angles of the quadrilateral ABCD be 2x, 5x, 7x and 4x respectively.

We know that sum of all the angles of a quadrilateral be 360

$$\angle A + \angle B + \angle C + \angle D = 360$$

$$\therefore 2x + 5x + 7x + 4x = 360$$

$$18x = 360$$

$$\Rightarrow x = 20$$

$$\therefore$$
 angles are  $\angle A = 40, \angle B = 100, \angle C = 140, \angle D = 80$ 

Now, since 
$$\angle A + \angle C = 180$$
,  $\angle B + \angle D = 180$ 

i.e sum of opposite angles of a quadrilateral is 180, hence it is a cyclic quadrilateral

7. What is the formula for finding the area of an open cylinder with base?

(1) 
$$2\pi rh$$

(2) 
$$\pi r^2 h$$

(3) 
$$\pi r(24 + r)$$

(4) 
$$2\pi r(4+r)$$

Ans. (No option matching)

Misprint in the options. Answer should be  $\pi r(2h+r)$ , but it is written  $\pi r(24+r)$  in option C

8. The diameter of roller is 1 meter and length is 2.8 meter. If it rolls 100 rounds in the same direction, how many square meter does it press?

Ans. (3)

$$r = 0.5 \, \text{m}$$

$$h = 2.8 m$$

**Sol.** C.S.A = 
$$2\pi \text{rh} = 2 \times \frac{22}{7} \times \frac{1}{2} \times \frac{28}{10} = 8.8 \,\text{m}^2$$

In 100 rounds, it will press  $8.8 \times 100 = 880$  square meter.

If Universal set  $U = \{3,4,5,6,7\}$   $A = \{5,7,8\}$  and  $B = \{4,5,8\}$  then what is  $A' \cap B'$ ? 9.

$$(4) \{3,4\}$$

Ans. (2)

**Sol.**  $U = \{3,4,5,6,7\}, A = \{5,7,8\}, B = \{4,5,8\}$ 

$$A' = U - A = \{3,4,6\}$$

$$B' = U - B = \{3,6,7\}$$

$$A' \cap B' = \{3,6\}$$

*10.* The printed price of a sari is Rs 2000. If after discount of 10% the profit is 20%. Then what is the net price of the sari?

- (1) Rs. 1600
- (2) Rs. 1200
- (3) Rs. 1500
- (4) Rs. 1800

Ans. (3)

**Sol.** Listing Price = 2000, Discount = 10%, Profit = 20%

Discount on List price = 
$$\frac{2000 \times 10}{100}$$
 = Rs.200

S.P = L.P - Discount = 2000 - 200 = Rs. 1800

Profit = 
$$\frac{SP - CP}{CP} \times 100$$

$$\therefore 20 = \frac{1800 - CP}{CP} \times 100$$

$$\therefore \frac{CP}{5} = 1800 - CP$$

$$\therefore CP = 9000 - 5 \times CP$$

$$\therefore 6 \times CP = 9000$$

$$\therefore$$
 CP = 1500

So the net Price of the Sari is Rs. 1500

11. The median of 7, 5, 8, x, 12, 17 is 10. Then what is the value of X.

$$(2)$$
 11

Ans. (3)

**Sol.** The Median of 7, 5, 8, x, 12, 17 is 10

Now arrange them in Ascending Order

$$\therefore$$
 5, 7, 8, x, 12, 17

Now the number of Observations, n = 6. So

$$Median = \frac{\left(\frac{n}{2}\right)^{th} + \left(\frac{n}{2} + 1\right)^{th}}{2} = 10$$

$$\therefore \frac{\left(3\right)^{\text{rd}} + \left(4\right)^{\text{th}}}{2} = 10$$

$$\therefore \frac{8+x}{2} = 10$$

$$\therefore 8 + x = 20$$

$$\therefore x = 12$$

**12**. 0 of which quadratic polynomial are 4 and 3.

(1) 
$$x^2 + 7x + 12$$
 (2)  $x^2 - 7x + 12$  (3)  $x^2 + 7x - 12$  (4)  $x^2 - 7x - 12$ 

(2) 
$$x^2 - 7x + 12$$

$$(3) x^2 + 7x - 12$$

(4) 
$$y^2 - 7y - 12$$

Ans. (2)

**Sol.** Zeros are 4 and 3, so factors are (x-4) and (x-3)

 $\therefore$  Required Quadratic Equation is  $(x-4)(x-3) = x^2 - 7x + 12$ .

If  $\frac{x}{3} + 7 = 15 - \frac{x}{5}$  then find the solution?

(1) 
$$x = 20$$

(2) 
$$x = 15$$

(3) 
$$x = 21$$

(4) 
$$x = 18$$

Ans. (2)

**Sol.** 
$$\frac{x}{3} + 7 = 15 - \frac{x}{5}$$
$$\Rightarrow \frac{x}{3} + \frac{x}{5} = 8$$

$$3 \quad 5$$

$$\Rightarrow \frac{8x}{15} = 8$$

$$\rightarrow v - 15$$

14. There are 5 red, 2 yellow and 7 shite roses in a flower vase. If a rose is selected randomly, the probability of the selection of white rose?

(1) 
$$\frac{5}{14}$$

(2) 
$$\frac{1}{7}$$

(3) 
$$\frac{1}{2}$$

**Sol.** There are 5 Red, 2 Yellow, 7 white Roses in a flower vase.

Probability of Selecting White Roses,  $P(W) = \frac{7}{14} = \frac{1}{2}$ 

If one factor of  $27x^3 + 64y^3$  is (3x+4y) what is the second factor? **15**.

$$(1) (3x - 4y)$$

(2) 
$$(3x^2 + 12xy + 4y^2)$$
 (3)  $(9x^2 + 12xy - 16y^2)$  (4)  $(9x^2 - 12xy + 16y^2)$ 

$$(3) (9x^2 + 12xy - 16y^2)$$

$$(4) (9x^2 - 12xy + 16y^2)$$

Ans. (4)

**Sol.**  $27x^3 + 64y^3$ 

$$(3x)^3 + (4y)^3 = (3x+4y)(9x^2-12xy+16y^2)$$

The HCF is  $6x^2y^2$  and LCM  $36x^3y^3$  of two terms. If one term is  $12x^3y^2$  what is the second term? *16.* 

(1) 
$$18x^2y^2$$

(2) 
$$18x^3y^2$$

(3) 
$$36x^2y^3$$

(4) 
$$36x^3y^2$$

Ans. (No option matching)

**Sol.** Option is Missing.  $LCM \times HCF = a \times b$ , where a is first term and b is second term.

$$LCM = 36x^3y^3$$
,  $HCF = 6x^2y^2$ ,  $a = 12x^3y^2$ 

$$LCM \times HCF = a \times b$$

$$(36x^3y^3) \times (6x^2y^2) = (12x^3y^2) \times b$$

$$\Rightarrow$$
 b =  $18x^2y^3$ 

If  $p(x) = 2x^3 - 3x^2 + 5x - 4$  is divided by (x - 2), what is remainder? *17*.

$$(2)$$
 8

$$(4) -10$$

Ans. (3)

**Sol.**  $p(x) = 2x^3 - 3x^2 + 5x - 4$  is divisible by (x - 2)

:. By Remainder Theorem, remainder is  $p(2) = 2(2)^3 - 3(2)^2 + 5(2) - 4 = 16 - 12 + 10 - 4 = 10$ 

18. Two concentric circles are  $\Theta(P, 5)$  and  $\Theta(P, 13)$ . The tangents of the small circle is the chord of the big circle. What is the length of it?

$$(1)$$
 12

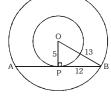
$$(4)$$
 24

Ans. (4)

**Sol.** OP is the radius of smaller circle and OB is the radius of bigger circle and AB is the tangent to the smaller circle passing through point P.

$$OP^2 + PB^2 = OB^2$$

$$\therefore PB^2 = 132 - 52$$



*19.* Mother was at age of 30 when the son was born. Now the sum of the age mother and son is 40 years. So after 10 years what is the age of the son?

- (1) 5 years
- (2) 10 years
- (3) 15 years
- (4) 20 years

Ans. (3)

**Sol.** Let present age of mother is 30 years.

After x years, the sum of mother and son's age will be 40 years.

i.e mother's age = (30 + x)years and Son's age = x years

$$\therefore 30 + x + x = 40$$

$$\therefore 30 + 2x = 40$$

$$\therefore 2x = 10$$

 $\therefore$  After 10 years, Son's age will be, (10+5) = 15 years.

- *20*. Which is not the identity true for trigonometric rations?
  - (1)  $\sin^2 \theta + \cos^2 \theta = 1$

- (2)  $\tan \theta = \cot (90 \theta)$  (3)  $\sec^2 \theta + \tan^2 \theta = 1$  (4)  $\csc^2 \theta \cot^2 \theta = 1$

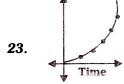
- **Sol.** By going through options incorrect identity is option C and correct identity is  $\sec^2 \theta \tan^2 \theta = 1$ .
- 21. How many meters is equal to 1 nanometer?
  - (1)  $10^{-9}$  meter
- (2)  $10^{-10}$  meter
- (3)  $10^9$  meter
- (4)  $10^{10}$  meter

Ans. (1)

- Prefix 'nano' stands for  $10^{-9}$ . Therefore, 1 nanometer =  $10^{-9}$  meter
- A light ray enters from denser medium to rarer medium. What is the angle of incidence called that has 90° angle of *22*. refraction?
  - (1) angle of refraction
- (2) critical angle
- (3) angle of deviation
- (4) angle of reflection

Ans. (2)

**Sol.** When angle of incidence equals critical angle, then angle of refraction is 90°.



Which motion does the graph of distance and time shows for accelerated motion?

(1) Non-uniformly accelerated

(2) Constant accelerated

(3) Uniformly accelerated

(4) Uniformly retarded motion

Ans. (3)

Sol. Distance-time equation for a uniformly accelerated motion is given by

$$s = ut + \frac{1}{2} at^2$$

Nature of distance-time graph for the above equation is parabolic.

Since the graph shown in figure is a parabola, the motion represented by it is a uniformly accelerated motion.

- 24. Which law of Newton gives the value of force?
  - (1) First law
- (2) Second law
- (3) Third law
- (4) All

Ans. (2)

**Sol.** According to Newton's second law of motion,

$$Force = \frac{Change in momentum}{Time}$$

or, Force =  $Mass \times Acceleration$ 

Therefore, Newton's Second law of motion gives the value of force.

- *25*. Due to which motion of light does the Tyndall effect occur?
  - (1) Incidence
- (2) Refraction
- (3) Scattering
- (4) Distersion

Ans. (3)

- Tyndall effect occurs due to scattering of light in many directions by colloidal particles. Sol.
- The absolute refractive index of any medium is *26*.
  - (1) 1

- (2) > 1
- (3) < 1
- (4) 0

Ans. (2)

**Sol.** Absolute refractive index of any medium =  $\frac{\text{Speed of light in vacuum}}{\text{Speed of light in medium}}$ 

|             | medium is always greater   | rthan 1.                                    |                                 |         |                            |  |  |
|-------------|--|---|---------------------------------|---------|----------------------------|--|--|
| <b>27</b> . | Which fundamental parti  | cles did Chadwick invent ir                 | n 1932?                         |         |                            |  |  |
|             | (1) Electron   | (2) Proton                                  | (3) Neutron                     | (4)     | All the three              |  |  |
| Ans.        | (3)  |   |                                 |         |                            |  |  |
| Sol.        | Chadwick discovered neutron in 1932 for which he was awarded Nobel Prize in Physics in 1935. |   |                                 |         |                            |  |  |
| <b>28</b> . | What is a gaseous fuel us  | What is a gaseous fuel used at home called? |                                 |         |                            |  |  |
|             | (1) L.P.G  | (2) C.N.G                                   | (3) P.N.G                       | (4)     | All                        |  |  |
| Ans.        | (1)  |   |                                 |         |                            |  |  |
| Sol.        | Gaseous fuel used at hon   | nes is called L.P.G (Liquefic               | ed Petroleum Gas).              |         |                            |  |  |
| <b>29</b> . | What is the measuring eq   | uipment called that measu                   | res the electric current passir | ng thr  | ough conductors?           |  |  |
|             | (1) Wattmeter  | (2) Ammeter                                 | (3) Galvanometer                | (4)     | Voltmeter                  |  |  |
| Ans.        | (2)  |   |                                 |         |                            |  |  |
| Sol.        | Ammeter is used to meas  | ure electric current flowing                | through a conductor.            |         |                            |  |  |
| <b>30</b> . | What are the names of the  | ne two Moons of the Mars?                   |                                 |         |                            |  |  |
|             | (1) Titan and Sheron   | (2) Titan and Demos                         | (3) Phobos and Demos            | (4)     | Sheron and Phobos          |  |  |
| Ans.        | (3)  |   |                                 |         |                            |  |  |
| Sol.        | Two Moons of the Mars a  | re known as Phobos and I                    | Demos.                          |         |                            |  |  |
| 31.         | Earthquake waves are of  | which type?                                 |                                 |         |                            |  |  |
|             | (1) Infrasonic   | (2) Ultrasonic                              | (3) Supersonic                  | (4)     | Intrasonic                 |  |  |
| Ans.        | (1)  |   |                                 |         |                            |  |  |
| Sol.        | Earthquake waves have f  | requency less than 20 Hz,                   | therefore they are known as     | infras  | onic waves.                |  |  |
| <b>32</b> . | Which branch of science  | is associated with the use o                | f X-rays and the Gamma ray      | s for t | he diagnosis and treatment |  |  |
|             | (1) Urology  | (2) Radiology                               | (3)Histology                    | (4)     | Pathology                  |  |  |
| Ans.        | <b>(2</b> )  |   |                                 |         |                            |  |  |
| Sol.        | Radiology is the branch o  | of science that uses X-rays a               | and Gamma rays for diagno       | se and  | d treatment of diseases.   |  |  |
| <b>33</b> . | The initial velocity of the  | free falling object is                      | ?                               |         |                            |  |  |
|             | (1) More   | (2) Less                                    | (3)Zero                         | (4)     | 9.8 m/s                    |  |  |
| Ans.        | (3)  |   |                                 |         |                            |  |  |
| Sol.        | The initial velocity of a fr   | ee falling object is zero as i              | t is released from rest.        |         |                            |  |  |
| <b>34</b> . | During a chemical reaction   | on between acid and base,                   | Salt and water are formed.      | What    | is the process called?     |  |  |
|             | (1) Neutralization   | (2) Corrosion                               | (3) Hydrolysis                  | (4)     | Ionization                 |  |  |
| Ans.        | (1)  |   |                                 |         |                            |  |  |
| Sol.        | A chemical reaction of a   | n acid and a base is called                 | a neutralization reaction.      |         |                            |  |  |
| <b>35</b> . | Which of the following is  | a strong acid?                              |                                 |         |                            |  |  |
|             | (1) Acitic acid  | (2) Cytric acid                             | (3) Nitric acid                 | (4)     | Oxalic acid                |  |  |
| Ans.        | (3)  |   |                                 |         |                            |  |  |
| Sol.        | Only nitric acid (an inorga  | anic acid) completely disso                 | ciates in aqueous medium. I     | Rest a  | ıll are weak acids.        |  |  |
| <b>36</b> . | Which method is used for   | r concentration of those or                 | es obtained in the Sulphide f   | orm?    |                            |  |  |
|             | (1) Magnetic separation  | (2) Centrifugation                          | (3) Froth Flotation Metho       | d (4)   | Calcination                |  |  |
| Ans.        | (3)  |   |                                 |         |                            |  |  |
| Sol.        | For concentration of sulpl   | hide ores Froth flotation me                | ethod (based on wetting prop    | oertie: | s) is used.                |  |  |

Since speed of light in vacuum is always greater than speed of light in any medium, absolute refractive index of the

| <b>37</b> . | Which of the following pairs is not suitable for organic functional group of the carbonic compound?  |                                 |                                 |  |  |
|-------------|--|---------------------------------|---------------------------------|--|--|
|             | (1) Carboxylic acidCOOH  |                                 | (2) Ketone - $>$ C = 0          |  |  |
|             | (3) Aldehyde CHO   |                                 | (4) EsterOH                     |  |  |
| Ans.        | (4)  |                                 |                                 |  |  |
| Sol.        | >C = O having compo  | unds are known as carbonic      | compounds. Except (4) opti      | from all are having $>$ C $=$ O group. |  |
| <b>38</b> . | What is the chemical na  | me of the quick lime?           |                                 |  |  |
|             | (1) Calcium Oxide  | (2) Calcium Carbonate           | (3) Calcium Hydroxide           | (4) Carbon Dioxide                     |  |
| Ans.        | <b>(1)</b>   |                                 |                                 |  |  |
| Sol.        | Calcium oxide is also kn   | own as quick lime.              |                                 |  |  |
| <b>39</b> . | Which of the following is  | s a compound?                   |                                 |  |  |
|             | (1) Iron   | (2) Air                         | (3) Washing Soda                | (4) Mercury                            |  |
| Ans.        | <b>(3)</b>   |                                 |                                 |  |  |
| Sol.        | Compound is a substar washing soda is fulfilling   | <del>-</del>                    | o or more elements in fixed     | d proportion by mass. Here only        |  |
| <b>40</b> . | While preparing ${\rm CO_2}$ in  | laboratory, on which of the fo  | ollowing substances hydroch     | nloride acid is poured?                |  |
|             | (1) Pieces of Zinc   |                                 | (2) Pieces of marble            |  |  |
|             | (3) The particles of Copp  | oer Sulphate                    | (4) Ammonium Chloride           |  |  |
| Ans.        | (2)  |                                 |                                 |  |  |
| Sol.        | When acid reacts with m  | netal carbonates or metal hy    | drogen carbonates it forms      | metal salt, Water and ${\rm CO}_2$ .   |  |
| 41.         | Which of the following g   | gases is used to show the clo   | uds or artificial smoke in filn | n or drama?                            |  |
|             | (1) Carbon Dioxide   | (2) Oxygen                      | (3) Nitrogen                    | (4) Hydrogen                           |  |
| Ans.        | <b>(1)</b>   |                                 |                                 |  |  |
| Sol.        | Carbon Dioxide gas is used for artificial smoke or clouds in film or drama. CO <sub>2</sub> stored in compressed cylinders is used in conjunction with theatrical fog machines to produce low lying fog effects. |                                 |                                 |  |  |
| <b>42</b> . | Which of the following re  | elations between mole and n     | nass correct?                   |  |  |
|             | (1) Mass = Weight/Mass   | S                               | (2) Weight = $Mass/Mole$        |  |  |
|             | (3) Mole = Weight/Aton   | nic weight                      | (4) All of them                 |  |  |
| Ans.        | (3)  |                                 |                                 |  |  |
| Sol.        | For calculating mole wei   | ght is divided by atomic weig   | ght or molecular weight.        |  |  |
| <b>43</b> . | From which compound  | are the tablets made that are   | used for conservation of gr     | ain?                                   |  |
|             | (1) Aluminum Phosphid  | le                              | (2) Zinc Phosphide              |  |  |
|             | (3) Manganese Dioxide  |                                 | (4) Potassium Permangar         | nate                                   |  |
| Ans.        | <b>(1)</b>   |                                 |                                 |  |  |
| Sol.        | Aluminium phosphide is   | s a major constituent of the ta | ablets which are made for co    | onservation of grains.                 |  |
| <b>44</b> . | Which are the compone  | nts of stainless steel?         |                                 |  |  |
|             | (1) Copper, Zinc, Nickle   |                                 | (2) Iron, Chromium, Nick        | de                                     |  |
|             | (3) Iron, Carbon, Tin  |                                 | (4) Copper, Chromium, 7         | <b>C</b> in                            |  |
| Ans.        | . (2)  |                                 |                                 |  |  |
| Sol.        | Stainless steel (an alloy)   | is made up of Iron, Carbon,     | Chromium and Nickle.            |  |  |
| <b>45</b> . | What is the electronic co  | onfiguration of Sulphur?        |                                 |  |  |
|             | (1) 2, 6, 8  | (2) 2, 4, 8                     | (3) 2, 8, 6                     | (4) 2, 6, 4                            |  |
| Ans.        | (3)  |                                 |                                 |  |  |
| Sol.        | Sulphur = $_{16}S^{32}$ ; Atomic number is 16 so configuration will be 2, 8, 6.  |                                 |                                 |  |  |

| <b>46</b> . | How many atoms are there in a compound of a mole?  |   |   |                                  |  |
|-------------|--|---|---|----------------------------------|--|
|             | (1) $60.22 \times 10^{-23}$  | (2) $602.2 \times 10^{-23}$                               | $(3) 6.022 \times 10^{23}$                | (4) $6022 \times 10^{23}$        |  |
| Ans.        | (3)  |   |   |                                  |  |
| Sol.        | Question is wrong. As a compound is made up of minimum two different type of atoms so here correct question will be how many molecules are there in a compound of a mole? In that condition correct answer will (3). |   |   |                                  |  |
| <b>47</b> . | Which of the following fac   | ctors does a plant use for pr                             | ocess of photosynthesis?                  |                                  |  |
|             | (1) Sunlight   | (2) Chlorophyll   | (3) $CO_2$ and $H_2O$                     | (4) All of them                  |  |
| Ans.        | <b>(4)</b>   |   |   |                                  |  |
| Sol.        | A plant use all factors i.e,   | Sunlight, Chlorophyll, CO <sub>2</sub> a                  | and $\rm H_2O$ for the process of $\rm p$ | photosynthesis.                  |  |
| <b>48</b> . | Which is the longest organ   | n of the digestive system?                                |   |                                  |  |
|             | (1) Oesophagus   | (2) Stomach   | (3) Small Intestine                       | (4) Large Intestine              |  |
| Ans.        | (3)  |   |   |                                  |  |
| Sol.        |  | an beings is about 9meter l<br>an of Human Digestive syst |   | e is 6.5 meter long.Hence, Small |  |
| <b>49</b> . | Which of the following livi  | ng being has a three chamb                                | ered heart?                               |                                  |  |
|             | (1) Frog   | (2) The Bat   | (3) Human                                 | (4) The mouse                    |  |
| Ans.        | <b>(1)</b>   |   |   |                                  |  |
| Sol.        | Frog is an amphibian so, i   | t has a three chambered he                                | art.                                      |                                  |  |
| <b>50</b> . | What is the name of the b  | plood vessels that provide n                              | utrition to the heart wall?               |                                  |  |
|             | (1) Pulmonary Arteries   | (2) Pulmonary Veins                                       | (3) Coronary arteries                     | (4) Descending arota             |  |
| Ans.        | (3)  |   |   |                                  |  |
| Sol.        | Coronary Arteries are the  | blood vessels that provides                               | nutrition to the heart muscle             | es.                              |  |
| <b>51</b> . | Which organelle is conside   | ered as a suicide bag?                                    |   |                                  |  |
|             | (1) Centrosome   | (2) Mesosomes   | (3) Lysosomes                             | (4) Chromosome                   |  |
| Ans.        | (3)  |   |   |                                  |  |
| Sol.        | Lysosomes contain enzyn  | nes which destroy the cell by                             | digesting all cell organelles             | of the cell.                     |  |
| <b>52</b> . | Which one of the followin  | g pairs is not correct?                                   |   |                                  |  |
|             | (1) The pituitary gland - A  | Adrenalin   | (2) Ovary - Estrogen                      |                                  |  |
|             | (3) Pancreas - Insulin   |   | (4) Testis -Testosterone                  |                                  |  |
| Ans.        | <b>(1)</b>   |   |   |                                  |  |
| Sol.        | Adrenaline hormone secre   | etes from adrenal glands.                                 |   |                                  |  |
| <b>53</b> . | Which is the common me   | thod of artificial reproduction                           | on in plants?                             |                                  |  |
|             | (1) Cutting  | (2) Layering  | (3) Grafting                              | (4) All of them                  |  |
| Ans.        | <b>(4)</b>   |   |   |                                  |  |
| Sol.        | All the methods i.e, cutting, layering and grafting are the common methods of artificial reproduction in plants.   |   |   |                                  |  |
| <b>54</b> . | With what are the disease like Swine Flu, Dengue and Chikungunya Fever spread?   |   |   |                                  |  |
|             | (1) Bacteria   | (2) Virus   | (3) Parasites                             | (4) Fungi                        |  |
| Ans.        | <b>(2)</b>   |   |   |                                  |  |
| Sol.        | Swine Flu, Dengue and C  | hikungunya are the diseases                               | s spread from virus.                      |                                  |  |
| <i>5</i> 5. | Living mechanical tissue i   | s:  |   |                                  |  |
|             | (1) Parenchyma   | (2) Collenchyma   | (3) Sclerenchyma                          | (4) Chlorenchyma                 |  |
| Ans.        | <b>(2)</b>   |   |   |                                  |  |
| Sol.        | Collenchyma contains nucleus and it provides strength to the plants hence a living mechanical tissue .   |   |   |                                  |  |

| <b>56</b> . | Which plant leaves have a parallel venation?                           |                                 |                               |              |                               |  |
|-------------|--|---------------------------------|-------------------------------|--------------|-------------------------------|--|
|             | (1) Peepal leaves  | (2) Hibiscus leaves             | (3) Banana leaves             | (4)          | Banyan tree                   |  |
| Ans.        | (3)  |                                 |                               |              |                               |  |
| Sol.        | Banana is a monocot plan   | nt hence have a parallel ven    | ation.                        |              |                               |  |
| <i>57.</i>  | For which of the following diseases vaccine has not been invented yet? |                                 |                               |              |                               |  |
|             | (1) Jaundice   | (2) Cholera                     | (3) Typhoid                   | (4)          | Chikungunya                   |  |
| Ans.        | <b>(4)</b>   |                                 |                               |              |                               |  |
| Sol.        | Chikungunya vaccine has  | not been invented yet.          |                               |              |                               |  |
| <b>58</b> . | The inner layer of the pha   | rynx of a frog is made of       | Epithelium.                   |              |                               |  |
|             | (1) Squamous   | (2) Cuboidal                    | (3) Ciliated                  | (4)          | Columnar                      |  |
| Ans.        | (3)  |                                 |                               |              |                               |  |
| Sol.        | Inner layer of pharynx of f  | frog is made up of ciliated ep  | oithelium cells.              |              |                               |  |
| <b>59</b> . | Which of the following gas   | ses mainly increases global w   | varming?                      |              |                               |  |
|             | (1) Carbon monoxide  | (2) Nitrous oxide               | (3) Carbon dioxide            | (4)          | Sulphur Dioxide               |  |
| Ans.        | <b>(2)</b>   |                                 |                               |              |                               |  |
| Sol.        | Nitrous oxide gas is mainly global warming.                            | increases global warming be     | ecause it is 300 times more p | owe          | rful than other gases causing |  |
| <i>60.</i>  | Which of the following is t  | he example of the waste bio     | -decomposition of living bei  | ingsi        | )                             |  |
|             | (1) Vegetable  | (2) Glass                       | (3) Plastic                   | (4)          | Metal                         |  |
| Ans.        | <b>(1)</b>   |                                 |                               |              |                               |  |
| Sol.        | Vegetable is a Bio degrada   | able component.                 |                               |              |                               |  |
| <b>61</b> . | Which method is used to l  | know the time line of the orc   | haJological remains?          |              |                               |  |
|             | (1) Dropping method  | (2) Carbon dating method        | (3) Metric dating method      | (4)          | All of them                   |  |
| Ans.        | <b>(2)</b>   |                                 |                               |              |                               |  |
| Sol.        | Carbon dating method is  | used to know the time line o    | f the archeological remains.  |              |                               |  |
| <b>62</b> . | With which Governor Ger  | neral's efforts did the teachin | g of English language begin   | in Ir        | ndia?                         |  |
|             | (1) Lord Cornwallis  | (2) Lord Ripon                  | (3 Lord Macaulay              | (4)          | Lord Hastings                 |  |
| Ans.        | (3)  |                                 |                               |              |                               |  |
| Sol.        | Lord Macaulay  |                                 |                               |              |                               |  |
| <b>63</b> . | Who started the 'DakChou   | ıki, Tapal method which me      | ans 'GhodesvarSathetapalih    | alka         | aro'?                         |  |
|             | (1) GyasuddinTugluk  | (2) AllauddinKhilji             | (3) Razia Sultana             | (4)          | Mohd.Tuglak                   |  |
| Ans.        | <b>(2)</b>   |                                 |                               |              |                               |  |
| Sol.        | Mohd.Tughlak   |                                 |                               |              |                               |  |
| <b>64</b> . | Which of the following symbols in map indicates Railway?               |                                 |                               |              |                               |  |
|             | (1)  | (2)                             | (3)                           | <b>-</b> (4) | ~/~                           |  |
| Ans.        | <b>(2)</b>   |                                 |                               |              |                               |  |
| Sol.        | Symbol of railway  |                                 |                               |              |                               |  |
| <b>65</b> . | Where is the headquarters  | of the United Nation (UN)?      |                               |              |                               |  |
|             | (1) Rome   | (2) Paris                       | (3) Washington                | (4)          | New York                      |  |
| Ans.        | <b>(4)</b>   |                                 |                               |              |                               |  |
| Sol.        | New York - Head quarter of UNO.  |                                 |                               |              |                               |  |

| <i>66.</i>  | 5. By which pass of the Himalayas can we easily travel for the pilgrimage of the KM Mansarovar? |   |                                |                                 |  |  |
|-------------|---|---|--------------------------------|---------------------------------|--|--|
|             | (1) The Shipkila Ghat   | (2) The Jelapala Ghat   | (3) The Nathula Ghat           | (4) The Karakoram Ghat          |  |  |
| Ans.        | <b>(1)</b>  |   |                                |                                 |  |  |
| Sol.        | ShipkilaGhat  |   |                                |                                 |  |  |
| <b>67</b> . | Which institution has bee   | n formed by Justice Mahade  | evGovindRanade for social      | reform.                         |  |  |
|             | (1) The Brhmosamaj  | (2) The PrarthnaSamaj   | (3) The AryaSamaj              | (4) The Satyashodhaksamaj       |  |  |
| Ans.        | <b>(2)</b>  |   |                                |                                 |  |  |
| Sol.        | The PrarthnaSamaj - form  | ned by Justice MahadevGov   | vindRanade                     |                                 |  |  |
| <i>68.</i>  | Which of the following riv  | vers does not meet the Gang   | ga?                            |                                 |  |  |
|             | (1) The koshi   | (2) The Chambal   | (3) The shon                   | (4) The Gandak                  |  |  |
| Ans.        | <b>(2)</b>  |   |                                |                                 |  |  |
| Sol.        | The Chambal river does n  | not meet the ganga  |                                |                                 |  |  |
| <b>69</b> . | Whose statue is there in f  | ront of the VidhanSabha of  | Gujarat in sitting posture?    |                                 |  |  |
|             | (1) Vitthalbhai Patel   | (2) Vallabhbhai Patel   | (3) Mahatma Gandhi             | (4) Dr. Jivraj Mehta            |  |  |
| Ans.        | <b>(1)</b>  |   |                                |                                 |  |  |
| Sol.        | Vitthalbhai Patel statue ir   | n front of thevidhansabha c   | of Gujarat in sitting posture  |                                 |  |  |
| <b>70</b> . | Which of the following riv  | ers meets the river Krishna?  |                                |                                 |  |  |
|             | (1) The Tungbhadra  | (2) The Koyna   | (3) The GhatPrahbha            | (4) All of them                 |  |  |
| Ans.        | <b>(4)</b>  |   |                                |                                 |  |  |
| Sol.        | The Tundbhadra, The Ko  | yna, The GhatPradbha All  | of them meet the river krish   | nna                             |  |  |
| <b>71</b> . | In which states there is "A   | In which states there is "Amravrishti" at the end of the summer and just before the setting of the monsoon? |                                |                                 |  |  |
|             | (1) Tamilnadu and Telangana   |   | (2) Andrapradesh and Tamilnadu |                                 |  |  |
|             | (3) Kerala and Karnataka  | a   | (4) Andrapradesh and Te        | elangana                        |  |  |
| Ans.        | (3)   |   |                                |                                 |  |  |
| Sol.        | Kerala and Karnataka, th  | ere is Amravrishti at the en  | d of the summer before the     | e monsoon.                      |  |  |
| <b>72</b> . | By which name is the Bh   | agirathi Ganga known as af  | ter it originates from the G   | ar goal?                        |  |  |
|             | (1) Padma   | (2) Jamuna  | (3) Meghna                     | (4) All                         |  |  |
| Ans.        | <b>(1)</b>  |   |                                |                                 |  |  |
| Sol.        | Padma by this name Bha  | girathi ganga known as afte   | er it originate from the gang  | otri.                           |  |  |
| <b>73</b> . | Which country has the la  | rgest written contitution?  |                                |                                 |  |  |
|             | (1) Britain   | (2) France  | (3) India                      | (4) America                     |  |  |
| Ans.        | (3)   |   |                                |                                 |  |  |
| Sol.        | India has the largest writt   |   |                                |                                 |  |  |
| 74.         | What was the name of the on the shore of Tungbhac   |   | id Bukkaray that had setup t   | he Hindu Maharajya- Vijayanagai |  |  |
|             | (1) AcharyaShilbhadra   | (2) Vidyaranya Swami  | (3) Swami Ramtirtha            | (4) GuruVirjanada Swami         |  |  |
| Ans.        | (2)   |   |                                |                                 |  |  |
| Sol.        | Vidyaranya Swami was tl   | he name of inspiring guru of  | f Harihar and Bukkaray         |                                 |  |  |
| <b>75</b> . | What is the position of In  | dia in the world with referer   | nce to area ?                  |                                 |  |  |
|             | (1) 6 <sup>th</sup>   | (2) 7 <sup>th</sup>   | (3) 8 <sup>th</sup>            | (4) 9 <sup>th</sup>             |  |  |
| Ans.        |   |   |                                |                                 |  |  |
| Sol.        | India ranks 7 <sup>th</sup> in the area   | a, in the world   |                                |                                 |  |  |

| <b>76</b> . | 76. Which country is called the land of "Midnight Summer"?   |                                |                                |                                       |  |  |
|-------------|--|--------------------------------|--------------------------------|---------------------------------------|--|--|
|             | (1) Sweden   | (2) Norway                     | (3) Spain                      | (4) Portugal                          |  |  |
| Ans.        | (2)  |                                |                                |                                       |  |  |
| Sol.        | Norway is called the la  | and of midnight sun.           |                                |                                       |  |  |
| <b>77</b> . | Where did Vastupal and Tejpal, the ministers of the RanaVirDhaval of Dhoika, ouiit the Jain temples?                                 |                                |                                |                                       |  |  |
|             | (1) Delwara (Abu)  | (2) Palitana                   | (3) Girnar                     | (4) All                               |  |  |
| Ans.        | <b>(1)</b>   |                                |                                |                                       |  |  |
| Sol.        | Delwara (Abu) this jai   | n temple was built by Vastup   | oal and Tejpal the minister of | RanaVirdhaval.                        |  |  |
| <b>78</b> . | Which Veda of the Arg  | yas is called the 'Gangotrf of | music?                         |                                       |  |  |
|             | (1) The Rigveda  | (2) The Yajurveda              | (3) The Samveda                | (4) The Atharveda                     |  |  |
| Ans.        | (3)  |                                |                                |                                       |  |  |
| Sol.        | The Samved the gang  | otri of music                  |                                |                                       |  |  |
| <b>79</b> . | In which state of India  | was the Panchayati Raj wa      | s established first?           |                                       |  |  |
|             | (1) Gujarat  | (2) Rajasthan                  | (3) Maharastra                 | (4) Madhya Pradesh                    |  |  |
| Ans.        | <b>(2)</b>   |                                |                                |                                       |  |  |
| Sol.        | Rajasthan where the fi   | irst panchayati raj establishe | d                              |                                       |  |  |
| <i>80.</i>  |  |                                | en coloured petticoat', kumi   | n, 'silk blouse' and 'belt around the |  |  |
|             | waist' the characterstic   | rs?                            |                                |                                       |  |  |
|             | (1) Manipuri   | (2) Kathak                     | (3) Bharatnatyam               | (4) Kathakali                         |  |  |
| Ans.        | (1)  |                                |                                |                                       |  |  |
| Sol.        | Manipuri Indian classical dance is the plaited green colourpaticot, kumin, silk blouse and belt around the waist the characteristic. |                                |                                |                                       |  |  |
| <b>81</b> . | Which of the following   | gs is not written by Mahakav   | iKalidas in Sanskrit?          |                                       |  |  |
|             | (1) AbhigyanShakunt  | alam (2) Rutusamhar            | (3) Kadambari                  | (4) Kumarsambhava                     |  |  |
| Ans.        | (3)  |                                |                                |                                       |  |  |
| Sol.        | Kadambari was not w  | ritten by kalidas in sanskrit  |                                |                                       |  |  |
| <b>82</b> . | In which cave is the gr  | eat piece of the Indina sculp  | ture Kailash temple situated   | ?                                     |  |  |
|             | (1) Ajanta   | (2) Ellora                     | (3) Elephanta                  | (4) Bagh                              |  |  |
| Ans.        | (2)  |                                |                                |                                       |  |  |
| Sol.        | Ellora - Kailsah temple  | e is situated here.            |                                |                                       |  |  |
| <i>8</i> 3. | Which of the following   | ; is not our neighbor country  | ?                              |                                       |  |  |
|             | (1) Nepal  | (2) Bhutan                     | (3) Iran                       | (4) Srilanka                          |  |  |
| Ans.        | (3)  |                                |                                |                                       |  |  |
| Sol.        | Iran is not our neighboring country.   |                                |                                |                                       |  |  |
| <b>84</b> . | Which is the highest postion in the Indian Army?   |                                |                                |                                       |  |  |
|             | (1) Field Marshall   | (2) Admiral                    | (3) Air chief Marshal          | (4) Lt. General                       |  |  |
| Ans.        | <b>(1)</b>   |                                |                                |                                       |  |  |
| Sol.        | Field Marshal the high   | est position in the Indian arr | ny after President.            |                                       |  |  |
| <b>85</b> . | Which is the state of In   | ndia that has the largest are  | a?                             |                                       |  |  |
|             | (1) Uttar Pradesh  | (2) Maharastra                 | (3) Rajasthan                  | (4) Madhya Pradesh                    |  |  |
| Ans.        | (3)  |                                |                                |                                       |  |  |
| Sol.        | Rajasthan is the largest stateof India, according to area.   |                                |                                |                                       |  |  |

| 86.         | What amount of the nation income of India is obtained from agriculture?                                 |                                   |                                    |                           |  |
|-------------|---|-----------------------------------|------------------------------------|---------------------------|--|
|             | (1) 65%   | (2) 26%                           | (3) 62%                            | (4) 22%                   |  |
| Ans.        | <b>(2)</b>  |                                   |                                    |                           |  |
| Sol.        | 26% of National Incom   | ne comes from agriculture.        |                                    |                           |  |
| <b>87</b> . | Who was the first speaker of the loksabha in India?   |                                   |                                    |                           |  |
|             | (1) NeelamSanjeev Reddy   |                                   | (2) Ganesh VasudevMavla            | ankar                     |  |
|             | (3) Mirakumari  |                                   | (4) SumitraMahajan                 |                           |  |
| Ans.        | <b>(2</b> )   |                                   |                                    |                           |  |
| Sol.        | Ganesh VasudevMavla   | nnkar was the first speaker of lo | oksabha in India.                  |                           |  |
| <i>88</i> . | Of which religion is the  | Tripitika the holy book belong    | <b>i</b> ?                         |                           |  |
|             | (1) Jain  | (2) Hindu                         | (3) Buddha                         | (4) Islam                 |  |
| Ans.        | (3)   |                                   |                                    |                           |  |
| Sol.        | Tripitaka is the holy bo  | ok of Buddha                      |                                    |                           |  |
| <b>89</b> . | What is 'Mahabhinishki  | ramana'?                          |                                    |                           |  |
|             | (1) The renunciation o  | f Mahavir                         | (2) The renunciation of B          | uddha                     |  |
|             | (3) The Sankaracharya   | a became sanyasi                  | (4) The renunciation of Guru Nanak |                           |  |
| Ans.        | (2)   |                                   |                                    |                           |  |
| Sol.        | The renunciation of Bu  | ddha is the mahabhinishkram       | ana                                |                           |  |
| <b>90</b> . | Which Indian state has  | been given special right in our   | r constitution?                    |                           |  |
|             | (1) Kerala  | (2) Assam                         | (3) Nagaland                       | (4) Jammu Kashmir         |  |
| Ans.        | <b>(4)</b>  |                                   |                                    |                           |  |
| Sol.        | Jammu and Kashmir has been given special right in our constitution                                      |                                   |                                    |                           |  |
| 91.         | Which right is not enlis  | sted in the list of fundamental   | rights?                            |                           |  |
|             | (1) Right to Protection   | against exploitation              | (2) Right to liberty               |                           |  |
|             | (3) Right to property   |                                   | (4) Right to education and         | d culture                 |  |
| Ans.        | (3)   |                                   |                                    |                           |  |
| Sol.        |   | listed in the fundamental righ    |                                    |                           |  |
| <b>92</b> . | What is the duration (T   | ime limit) for the member of t    | he Rajyasabha?                     |                           |  |
|             | (1) 4 yrs   | (2) 5 yrs                         | (3) 6 yrs                          | (4) 10 yrs                |  |
| Ans.        | (3)   |                                   |                                    |                           |  |
| Sol.        | Rajyasabha membersh   |                                   |                                    |                           |  |
| <b>93</b> . |   | man of the Indian constitution    | -                                  |                           |  |
|             | (1) Jawaharlal Nehru  |                                   | (2) Dr. B.R. Ambedkar              |                           |  |
| _           | (3) Dr. Rajendra Prasa  | d                                 | (4) Dr. SarvapalliRadha K          | rishnan                   |  |
| Ans.        |   |                                   |                                    |                           |  |
| Sol.        | -   | as the first chairman of the Co   | -                                  |                           |  |
| 94.         |   | s through Tibet, in which state   |                                    |                           |  |
| <b>A</b>    | (1) Assam   | (2) Arunachal Pradesh             | (3) Meghalaya                      | (4) Nagaland              |  |
| Ans.        | • •   | a Tananana wasan ta 1             | and ankonin In dia C NI            | a sha Damus to this it is |  |
| Sol.        | . Arunachal Pradesh - The Tsangpo river taking u turn and enter in India from NamchaBarva in this state |                                   |                                    |                           |  |

| <b>95</b> . | The 16 <sup>th</sup> October is observed as 'Mourning day' which occurance is the reason of it? |   |                      |                       |  |  |
|-------------|---|---|----------------------|-----------------------|--|--|
|             | (1) The Jaliyawala Bag Massacre   |   | (2) Bang Bhang       |                       |  |  |
|             | (3) The dandikuch   |   | (4) All of them      |                       |  |  |
| Ans.        | (2)   |   |                      |                       |  |  |
| Sol.        | Bang Bhang after this   | 16th October is observed                                | as the mourning day. |                       |  |  |
| <i>96.</i>  | How many are the fac  | ctors of production?                                    |                      |                       |  |  |
|             | (1) 3   | (2) 4   | (3) 2                | (4) 5                 |  |  |
| Ans.        | (2)   |   |                      |                       |  |  |
| Sol.        | There are 4 factors of  | the production.   |                      |                       |  |  |
| <b>97</b> . | The concept of huma   | The concept of human development number was accepted by |                      |                       |  |  |
|             | (1) WHO   | (2) UNO   | (3) UNDP             | (4) UNICEF            |  |  |
| Ans.        | (3)   |   |                      |                       |  |  |
| Sol.        | UNDP accepted the c   | oncept of human developr                                | ment.                |                       |  |  |
| <b>98</b> . | Which year was declared as 'The international Women's year' by the UNO?                         |   |                      |                       |  |  |
|             | (1) 1975  | (2) 2002  | (3) 1990             | (4) 2001              |  |  |
| Ans.        | <b>(2)</b>  |   |                      |                       |  |  |
| Sol.        | 2002 was declared as International women's year by the UNO                                      |   |                      |                       |  |  |
| <b>99</b> . | The Indian standard time line passes from the city, which is that?                              |   |                      |                       |  |  |
|             | (1) Aurangabad  | (2) Lucknow   | (3) Allahabad        | (4) Hydarabad         |  |  |
| Ans.        | (3)   |   |                      |                       |  |  |
| Sol.        | Allahabad is the city from where IST line pass  |   |                      |                       |  |  |
| 100.        | . In which state is the Kanchan Janghapark situated?  |   |                      |                       |  |  |
|             | (1) Manipur   | (2) Sikkim  | (3) Nagaland         | (4) Arunachal Pradesh |  |  |
| Ans.        | (2)   |   |                      |                       |  |  |
| Sol.        | Sikkim is the state whereKanchanjangha parkis situated.   |   |                      |                       |  |  |