



**CLASS – 10<sup>th</sup> (ENGINEERING)**  
**Paper-2**  
**POTENTIAL ANALYSIS TEST**

Time : 90 minutes

Maximum Marks : 180



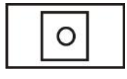
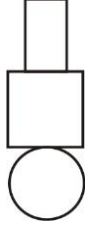

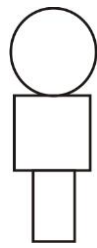
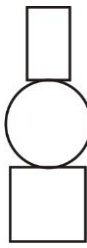
**-: Important Instructions :-**

- (i) Use only Black Ball Point pen.
- (ii) This test booklet contains 45 questions
- (iii) Each question is allotted **4 marks for correct response**.
- (iv) **1 mark will be deducted** for marking incorrect or multiple responses.
- (v) No deduction will be made from total marks for unattempted questions.
- (vi) For each question, there is **only 1 correct** response.

Name of Student (in Capital Letter) : \_\_\_\_\_

Candidate Signature : \_\_\_\_\_

Invigilator Signature : \_\_\_\_\_

1. Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday.  
 What day comes three days after the day which comes two days after the day which comes immediately after the day which comes two days after Monday?  
 (A) Wednesday (B) Friday (C) Tuesday (D) Sunday
2.  is to :  as :: What is to :   
 (A)  (B)  (C)  (D) 
3. How many minutes is it before 12 noon if 1 hour 39 minutes ago it was twice as many minutes past 8 am?  
 (A) 36 (B) 47 (C) 34 (D) 27
4. In a Tennis Open tournament 71 persons have signed up for elimination rounds. All players are to be paired up for the first round, but because 71 is an odd number one player gets a bye, which promotes him to the second round, without actually playing in the first round. The pairing continues on the next round, with a bye to any player left over. If the schedule is planned so that a minimum number of matches are required to determine the champion, the number of matches which must be played is  
 (A) 71 (B) 70 (C) 69 (D) 36
5. ABC forms an equilateral triangle in which B is 2 km from A. A person starts walking from B in a direction parallel to AC and stops when he reaches a point D directly east of C. He, then, reverses direction and walks till he reaches a point E directly south of C. Then D is  
 (A) 3 km east and 1 km north of A (B) 3 km east and 3 km north of A  
 (C) 3 km east and 1 km south of A (D) 3 km west and 3 km north of A
6. A contractor agreed to finish a piece of work in 150 days. He employed 75 men and made them work for 8 hours per day. However, after 90 days, he realized that only  $\frac{2}{7}$ th of the work was completed. How many more men would he need to employ to complete the work on time if he intended to make everybody work for 10 hours per day henceforth?  
 (A) 75 (B) 100 (C) 150 (D) 225

*Space for Rough Work*

7. Raman ranks sixteenth from the top and forty ninth from the bottom in a class. How many students are there in the class?  
(A) 64 (B) 65 (C) 66 (D) 63
8. If a man cycles at 10 km/h, then he arrives at the certain place at 1 pm. If he cycles 15 km/h, he will arrive at the same place at 11 am. At what speed must he cycle to get there at noon?  
(A) 11 km/h (B) 12 km/h (C) 13 km/h (D) 14 km/h
9. In a 500 metres race, B starts 45 metres ahead of A, but A wins the race while B is still 35 metres behind. What is the ratio of the speeds of A to B assuming that both start at the same time?  
(A) 25 : 21 (B) 25 : 20 (C) 5 : 3 (D) 5 : 7
10. In a town, 45% population read magazine A, 55% read magazine B, 40% read magazine C, 30% read magazines A and B, 15% read magazines B and C, 25% read magazines A and C; and 10% read all the three magazines. What percentage do not read any magazine?  
(A) 10% (B) 15% (C) 20% (D) 25%
11. A selection is to be made for one post of Principal and two posts of Vice-Principal. Amongst the six candidates called for the interview, only two are eligible for the post of Principal while they all are eligible for the post of Vice-Principal. The number of possible combinations of selectees is :  
(A) 4 (B) 12 (C) 18 (D) 20
12. A student has to opt for 2 subjects out of 5 subjects for a course, namely, Commerce, Economics, Statistics, Mathematics I and Mathematics II. Mathematics II can be offered only if Mathematics I is also opted. The number of different combinations of two subjects which can be opted is :  
(A) 5 (B) 6 (C) 7 (D) 8
13. A person ordered 5 pairs of black socks and some pairs of brown socks. The price of a black pair was thrice that of a brown pair. While preparing the bill, the bill clerk interchanged the number of black and brown pairs by mistake which increased the bill by 100%. What was the number of pairs of brown socks in the original order ?  
(A) 10 (B) 15 (C) 20 (D) 25
14. Usha runs faster than Kamala, Priti runs slower than Swati, Swati runs slower than Kamala. Who is the slowest runner?  
(A) Kamala (B) Priti (C) Swati (D) Usha

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*Space for Rough Work*

15. Each of the six different faces of a cube has been coated with a different colour i.e., V, I, B, G, Y and O. Following information is given :
1. Colours Y, O and B are on adjacent faces.
  2. Colours I, G and Y are on adjacent faces.
  3. Colours B, G and Y are on adjacent faces.
  4. Colours O, V and B are on adjacent faces.
- Which is the colour of the face opposite to the face coloured with O?
- (A) B                      (B) V                      (C) G                      (D) I

**Directions for Questions:** Answer the following questions based on the statements given below:  
Following questions are about 6 project reports of different heights from 6 different students and of 6 different colors displayed on a cupboard.

- (i) There are three Project Reports on each side of the aisle.
  - (ii) These six Project Reports are labeled as Piyush, Qadar, Richa, Sandesh, Tanvi and Urvashi.
  - (iii) The Project Reports are of different colours, namely, Red, Blue, Green, Orange, Yellow and White.
  - (iv) The Project Reports are of different heights.
  - (v) Tanvi, the tallest Project Report, is exactly opposite to the Red coloured Project Report.
  - (vi) The shortest Project Report is exactly opposite to the Green coloured Project Report.
  - (vii) Urvashi, the Orange coloured Project Report, is located between Piyush and Sandesh.
  - (viii) Richa, the Yellow coloured Project Report, is exactly opposite to Piyush.
  - (ix) Qadar, the Green coloured Project Report, is exactly opposite to Urvashi.
  - (x) Piyush, the White coloured Project Report, is taller than Richa, but shorter than Sandesh and Qadar.
16. Which is the second tallest Project Report?  
(A) Piyush                      (B) Sandesh                      (C) Qadar                      (D) cannot be determined.
17. What is the colour of the tallest Project Report?  
(A) Red                      (B) Blue                      (C) Green                      (D) Yellow
18. What is the color of the report named Richa?  
(A) Red                      (B) Blue                      (C) Green                      (D) Yellow
19. Which is the tallest Project Report?  
(A) Qadar                      (B) Richa                      (C) Sandesh                      (D) Tanvi
20. What is the colour of the Project Report diagonally opposite to the Yellow coloured Project Report?  
(A) White                      (B) Blue                      (C) Green                      (D) Red

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*Space for Rough Work*

**PASSAGE-1**

Read each of the following passages carefully and answer the questions that follow.

Atmospheric jet streams were discovered towards the end of World War II by U.S. bomber pilots over Japan and by German reconnaissance aircraft over the Mediterranean. The World Meteorological Organization defines a jet stream as a strong, narrow air current that is concentrated along nearly horizontal axis in the upper troposphere or stratosphere (10 to 50km altitude), characterized by wind motions that produce strong vertical lateral shearing action and featuring one of more velocity maximum. Normally a jet stream is thousands of kilometers long, hundreds of kilometers wide and several kilometers deep. With abundant radio-sonic data now available over the Northern Hemisphere it is possible to map the jet streams in the upper troposphere (near 10 to 12 km) in their daily occurrence and variation and to forecast them reasonably well with numerical prediction techniques.

21. An atmospheric jet stream is  
(A) a rare phenomenon.  
(B) three dimensional.  
(C) concentrated in the northern hemisphere.  
(D) more common in summer.
22. Detailed studies of atmospheric streams have been made over  
(A) South Africa (B) Europe (C) Australia (D) Antarctica
23. The atmospheric jet stream consists of  
(A) cumulous clouds bearing saturated moisture.  
(B) debris caused by meteorites.  
(C) air currents.  
(D) effluents from speeding aircraft

**PASSAGE-2**

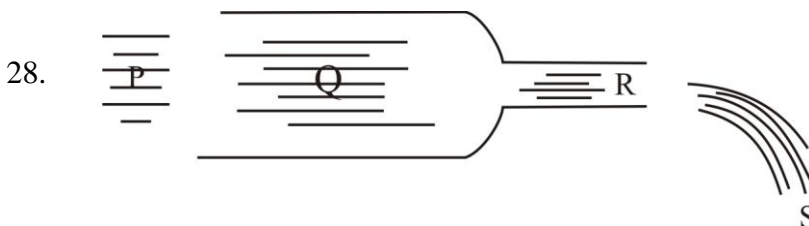
Hidden Island is an obscure island which is inhabited by two types of people: the 'Yes' type and the 'No' type. Native of type 'Yes' ask only questions the right answer to which is 'Yes' while those of type 'No' ask only questions the right answer to which is 'No'. For example. The 'Yes' type will ask questions like 'Is 2 plus 2 equal to 4?' while the 'No' type will ask questions like 'Is 2 plus 2 equal to five?' The following questions are based on your visit to the Hidden Island.

24. If an islander ask, 'Do, I belong to the 'No' type', which of the following is correct?  
(A) He is a 'No'.  
(B) He is a 'Yes'  
(C) It is impossible for him to have asked such a question.  
(D) His type cannot be identified.

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*Space for Rough Work*

25. Aman and Mohan are brothers from the Island. Mohan asks you, 'Is at least one of us brothers of type 'No'? You can conclude that  
 (A) Aman is 'NO', Mohan is 'Yes' (B) both are 'Yes'  
 (C) Aman is 'Yes', Mohan is 'No' (D) both are 'No'.
26. How many cases do you need if you have to pack 112 pairs of shoes into cases that each hold 28 shoes?  
 (A) 32 (B) 8 (C) 16 (D) 4
27. Starting from North, list the following compass points in the correct order working anti-clockwise.  
 ENE, WSW SE SSW WNW NNE SSE ESE then last is:  
 (A) WNW (B) SSE (C) SE (D) NNE

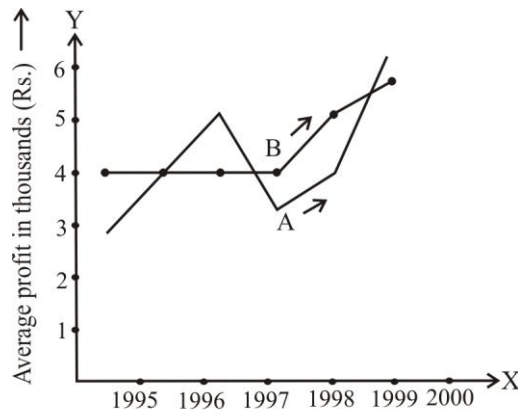


A large volume of water is gushing through a pipe which narrows at the outlet. At which point, P, Q, R or S will the water flow fastest?

- (A) P (B) Q (C) R (D) S
29. A B C D E F G H  
 What letter is two to the right of the letter which is four to the left of the letter which is immediately to the right of the letter four to the right of the letter C?  
 (A) B (B) D (C) F (D) H
30. Which of the following is 6 inches bigger in summer  
 (A) Eiffel Tower (B) Qutub Minar  
 (C) Leaning Tower of Pisa (D) The Petronas Tower
31. Man of the match in 500<sup>th</sup> Test match of India held at Green Park Stadium Kanpur was –  
 (A) Ravindra Jadeja (B) Ravi Chandran Ashwin  
 (C) Virat Kohali (D) Cheteshwar Pujara
32. The world's largest radio telescope nick named "Tianyan" has built in-  
 (A) USA (B) China (C) France (D) Germany

*Space for Rough Work*

**Directions for the following 4 (four) items :** The following graph shows the average profit of two fruit-sellers A and B in thousands (Rs.) per year from the year 1995 to 2000. Consider the graph and answer the 4 (four) items that follow :



33. In which year is the average profit of A and B same?  
 (A) 1995                      (B) 1996                      (C) 1997                      (D) 1998
34. What is the difference between the average profit of B and A in the year 1998 ?  
 (A) – Rs.100                      (B) – Rs.1,000                      (C) + Rs.600                      (D) –Rs.300
35. How much more average profit did A make in the year 2000 than in the year 1999?  
 (A) Rs.200                      (B) Rs.1,000                      (C) Rs.1,500                      (D) Rs.2,000
36. What is the trend of the average profit of B from the year 1997 to the year 2000?  
 (A) Non-increasing                      (B) Non-decreasing  
 (C) Steady                      (D) Fluctuating
37. The following table gives population and total income of a city for four years :

Year	1992	1993	1994	1995
Population in lakhs	20	21	22	23
Income in crores (Rs.)	1010	1111	1225	1345

Which one of the following statements is correct in respect of the above data?

- (A) Population increased by 5% or more every year.  
 (B) Income increased by 10% or more every year.  
 (C) Per capita income was always above Rs.5,000.  
 (D) Per capita income was highest in 1994.

*Space for Rough Work*

38. Geeta : Naresh has become a better boxer since he started meditation.  
Radha : Impossible. A boxer's most important asset is his aggressiveness.  
Radha's statement reflects her belief that  
(A) meditation tends to make a person less aggressive.  
(B) meditation has little or no effect on the person who practices it.  
(C) Naresh was a poor boxer earlier because he was not aggressive enough.  
(D) Naresh would not have taken to meditation as he was a boxer.
39. All good athletes want to win and all athletes who want to win eat a well-balanced diet; therefore all athletes who do not eat a well-balanced diet are bad athletes.  
The best conclusion from this statement is that.  
(A) no bad athlete wants to win.  
(B) no athlete who does not eat a well-balanced diet is a good athlete.  
(C) every athlete who eats a well-balanced diet is a good athlete.  
(D) all athletes who want to win are good athletes.
40. Examine the following statements :  
1. Lady's finger is tastier than cabbage.  
2. Cauliflower is tastier than lady's finger.  
3. Cabbage is not tastier than peas.  
The conclusion that can be drawn from these statements is that  
(A) peas are as tasty as lady's finger.  
(B) peas are as tasty as cauliflower and lady's finger.  
(C) cabbage is the least tasty of the four vegetables.  
(D) cauliflower is tastier than cabbage.
41. What is the common name for star Sirius  
(A) Pole star                      (B) Taurus                      (C) Dog star                      (D) Aquarius
42. Which part of his body did Charlie Chaplin insure  
(A) Eye                      (B) Feet                      (C) Face                      (D) Legs
43. On what is the Mona Lisa painted –  
(A) Canvas                      (B) Paper                      (C) Wall                      (D) Wood
44. Blue, red, green, yellow four Olympic rings colour what's missing-  
(A) Black                      (B) Orange                      (C) White                      (D) Brown
45. Which island's wild life is 90% unique-  
(A) Galapagos                      (B) Madagascar                      (C) Fiji                      (D) Ascension

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*Space for Rough Work*