

# SAMPLE PAPER INSTRUMENT TECHNICIAN

## ENGLISH

Choose the best option, from the given choices below each sentence.

1. Land where crops grow well is called \_\_\_\_\_.

- A) arid
- B) barren
- C) fertile
- D) poor

2. Aslam is elder \_\_\_\_\_ Sara.

- A) as
- B) that
- C) of
- D) than

3. I have a claim \_\_\_\_\_ my friend's help.

- A) for
- B) in
- C) on
- D) at

Each question below consists of a related pair of words, followed by five lettered pairs of words. Select the lettered pair that best expresses a relationship similar to that expressed in the original pair.

4. **PHYSICS: SCIENCE::**

- A) chemistry: laboratory
- B) astronomy: galaxy
- C) fashion: style
- D) fir: tree

Choose the lettered word or phrase that is most nearly opposite in meaning to the word in capital letters.

5. **USUAL:**

- A) greedy
- B) strange
- C) brief
- D) fortunate

6. **FIXED:**

- A) countable
- B) flat
- C) changing
- D) rigid

Read the following passage to answer question (7-8)

The Big Bang theory, an explanation of the origins of our universe, is one of the greatest intellectual achievements of the twentieth century. According to this theory, about ten to twenty million years ago, the matter of which the universe is made was infinitely tightly compressed. Something—called the Big Bang—turned this matter into a gigantic fireball. As the matter was set into motion and flew away from its compressed state, bits of it became glued together to create galaxies and later, stars and planets. The motion of the matter that flew out of the fireball continues today, and the universe appears to be expanding. The theory grew out of observations of the Doppler effect. It explains that the frequency of radiation given off by a moving body decreases as the sources get further from the observer. In 1965, scientists discovered that the radiation bathing the earth is at the precise microwave frequency that would be expected if the universe began with a big bang. Some scientists think the expansion of the universe will continue to infinity, while others theorize that gravity will, at some point in the far distant future, collapse back onto itself in a "big crunch," returning it to a state of compressed matter.

7. As a moving object gets further from its source, its radiation frequency:

- A) stays the same
- B) grows larger
- C) grows smaller
- D) expands
- E) collapse

8. The author of this passage thinks the Big Bang theory:

- A) has not been proven
- B) does not explain the creation of the universe
- C) is a very important contribution to knowledge
- D) explains what happens when a moving body gets further from its source
- E) shows the frequency of radiation bathing the earth

## ANALYTICAL REASONING

### Questions 9-12

Eight toys B, C and D (soft) and H, I, J, K and L (hard) are divided into four sets available to play for different groups of kids:

Two sets contain three toys apiece and each set is given to one of two pink groups.

A single toy is given to blue group.

A single toy is given to a yellow group.

Each set given to pink group must contain at least one soft toy.

B or C, but not both, are given to blue group.

L must be in the same set with J.

Each toy is given only once to one group for playing.

9. If C is given to pink group and J is not with it, which of the following must be true?

- A) C is in the same set as K.
- B) D is in the same set as L.
- C) H is in the same set as I.
- D) K is in a different set than H.
- E) I is in a different set than H.

10. If H and D are in the same set, all of the following can be true EXCEPT:

- A) B and I are in the same set.
- B) C and J are in the same set.
- C) D and K are in the same set.
- D) I is given to the yellow group.
- E) H and I are in the same set.

11. Which of the following may comprise a set given to a pink group?

- A) B, K, L
- B) C, I, K
- C) C, D, H
- D) D, H, J
- E) H, J, L

12. The yellow group could be given which of the following toys?

- A) B
- B) C
- C) D
- D) J
- E) K

**Recent surveys show that the layman is unaware of most new health laws and doesn't understand 99% of the remaining health laws. This is mainly because of the laymen's inattention and lack of interest.**

**13. To make the point, the author of this statement:**

- A) gives a general statement followed by supporting facts**
- B) argues by pointing out the effects and then the cause**
- C) uses specific examples to disprove an argument**
- D) infers an outcome and then attempts to support that outcome**
- E) assumes the conclusion is true and uses circular reasoning to state the premise**

## QUANTITATIVE

14. Which of these is NOT equal to  $\frac{4}{9}$ ?

A)  $\frac{2}{3}$

B)  $\frac{20}{45}$

C)  $\frac{8}{18}$

D)  $\frac{16}{36}$

15. A boy saves 18 Rupees in 8 weeks. He continuous to save at the same rate. How many weeks will it take him to save 81 rupees?

A) 13

B) 36

C) 40

D) 71

16. If the average (arithmetic means) of a and -5 is 10, then a=?

A) 25

B) 15

C) 5

D) -5

## IQ

17. If  $4=0$   
 $5=5$   
 $6=12$   
 $7=21$   
 $8=32$   
Then  $9=?$

- A) 27
- B) 36
- C) 45
- D) 54
- E) 63

18. If a man is called boy, boy is called baby, baby is called child, child is called cook and cook is called villain, then who will work in a kitchen?

- A) man
- B) cook
- C) villain
- D) baby
- E) boy

19. If  $20 - 4 = 10$ ,  $30 - 6 = 10$ , then  $40 - 8 = ?$

- A) 32
- B) 10
- C) 30
- D) 22

## SUBJECT

20. The magnetic field is usually provided by a strong permanent magnet mounted around the magnetron so that the magnetic field is \_\_\_\_\_ with the axis of the cathode.

- A) cancelled
- B) powered
- C) parallel
- D) perpendicular

21. The most reflective targets for short wavelengths have \_\_\_\_\_ angles between the reflective surfaces.

- A) 30°
- B) 45°
- C) 90°
- D) 180°

22. All of the following are true regarding a multiplexer, Except:

- A) Converts many inputs into single output
- B) Takes data from one line and distributes it to given number of output lines
- C) Is used in serial pattern generation
- D) Is used as a logic function generator

23. A network in which several computers can be connected together to communicate with each other and share common peripheral devices such as printer and fax machine etc is called:

- A) e-mail
- B) WAN
- C) LAN
- D) FTP

24. Anode current in a thyristor is made up of :

- A) Electrons only
- B) Holes only
- C) Electrons or holes
- D) Electrons and holes

25. TRIAC is a:

- A) Unidirectional switch
- B) Bidirectional switch
- C) Three directional switch
- D) Four directional switch

26. The antenna for the TV receiver is mounted \_\_\_\_\_ to get the maximum gain from the transmitter.
- A) Vertically
  - B) Horizontally
  - C) Freely
  - D) Can be vertical or horizontal
27. Transmission in which frequencies produced by amplitude modulation are symmetrically spaced above and below the carrier frequency is called \_\_\_\_\_.
- A) Single sideband modulation
  - B) Quadrature amplitude modulation
  - C) Amplitude modulation
  - D) Double sideband modulation
28. \_\_\_\_\_ permits the transmitter to operate with high efficiency.
- A) Grid modulator
  - B) Base modulator
  - C) Plate modulator
  - D) All of the above
29. \_\_\_\_\_ is a non linear amplifier.
- A) Class A
  - B) Class B
  - C) Class C
  - D) All of the above
30. The clamper circuit is used to:
- A) Introduce a dc level to an ac signal
  - B) Suppress variation in amplitude of the input signal
  - C) Obtain an output which is integral of the input signal
  - D) Raise positive half cycle of the signal
31. The extremely high frequency stability of quartz crystal is because of:
- A) its very high Q-factor
  - B) its very low temperature coefficient
  - C) The piezoelectric effect
  - D) Both A and B

**32. Which of the following memory has greater density of storage cells in the same chip area?**

- A) Stable MOS RAM**
- B) Dynamic MOS RAM**
- C) Core memory**
- D) None of the above**

**33. Throated Tungsten is used as:**

- A) Anode material**
- B) Grid material**
- C) Cathode material**
- D) Dynode material**

**34. When 60 Hz sinusoidal voltage is applied to input of full wave rectifier, the output frequency is:**

- A) 120 Hz**
- B) 60 Hz**
- C) 240 Hz**
- D) 0 Hz**

**35. A leakage capacitor has a value of resistance \_\_\_\_\_ its normal value.**

- A) Equal to**
- B) Higher than**
- C) Lower than**
- D) Wavering to**

**36. The ideal voltage sources have a \_\_\_\_\_ internal resistance.**

- A) Very high**
- B) Zero**
- C) Maximum 100**
- D) Minimum 30**

## ANSWER KEY

Q #	ANSWER CHOICE
1	C
2	D
3	C
4	D
5	B
6	C
7	C
8	C
9	B
10	A
11	B
12	E
13	B
14	A
15	B
16	A
17	C
18	C
19	B
20	C
21	C
22	B
23	C
24	D
25	B
26	B
27	D
28	C
29	C
30	A
31	A
32	A
33	C
34	A
35	C
36	B