

COCHIN SHIPYARD LIMITED

(A Govt. of India Enterprise)

KOCHI -15

**OBJECTIVE TYPE WRITTEN TEST TO THE POST OF
SENIOR PROJECT OFFICER (ELECTRICAL)**

31 JANUARY 2025

DURATION OF THE TEST : 60 Minutes

MAXIMUM MARKS : 50

DO NOT OPEN THIS QUESTION PAPER-CUM-ANSWER BOOKLET UNTIL ASKED TO DO SO

GENERAL INSTRUCTIONS

- ANSWER ALL QUESTIONS.** There shall be no negative marks.
- Answers are to be marked using ✓ mark against the most appropriate option among the options provided in the Question Booklet using BALL POINT PEN.**
- Rough work, if any, is to be done on space provided in the Question Booklet only. No separate sheet will be provided for rough work.
- Calculators, Mobile, Electronic items etc., are not permitted inside the examination hall.**
- Candidates seeking, receiving and /or giving assistance during the test will be disqualified.
- The right to exclude any question (s) from final evaluation rests with CSL.
- Do not seek any clarification on any item in the Question Booklet. Use your judgment.

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Please fill in the following details using ball point pen.

Name of Candidate	
Registration No.	
Name of Post	
Signature of candidate	
Signature of invigilator	

**THIS QUESTION PAPER-CUM-ANSWER BOOKLET SHOULD BE HANDED OVER
TO THE INVIGILATOR ON COMPLETION OF THE TEST**

**OBJECTIVE TYPE TEST FOR THE POST OF SENIOR PROJECT OFFICER
(ELECTRICAL) ON CONTRACT BASIS FOR CKSRU, KOLKATA**

GENERAL KNOWLEDGE

1. Which of the following is the correct order of Tennis tournament?
 - a) French Open — Australian Open — Wimbledon — US open
 - b) Australian Open -French Open — Wimbledon — US open
 - c) US open — French open — Australian open — Wimbledon
 - d) None of the above

2. The UPI (Unified Payments Interface) is a digital payment system in India developed by-
 - a) Reserve Bank of India
 - b) State Bank of India
 - c) Unique Identification Authority of India
 - d) National Payment Corporation of India

3. Which one of the following languages is not recognized in the eighth schedule of the constitution of India?
 - a) English
 - b) Sanskrit
 - c) Urdu
 - d) Nepali

4. When was the Union Budget for the financial year 2024-25 presented?
 - a) 1 July, 2024
 - b) 11 July, 2024
 - c) 23 July, 2024
 - d) 31 July, 2024

5. Which of the following is not a computer virus?

- a) AIDS
- b) Anna Kournikova
- c) Brain
- d) Don

6. What is the colour coding for the ground wire in electrical systems?

- a) Red
- b) Black
- c) Green
- d) Yellow

7. Recently, the Space Exploration and Research Agency (SERA) announced which country as a partner nation for the human spaceflight programme?

- a) Australia
- b) India
- c) Japan
- d) Pakistan

8. Which sport is being introduced in the 2024 Khelo India Youth Games for the first time?

- a) Squash
- b) Canoeing
- c) Kayaking
- d) Canoe Slalom

9. Which word does NOT belong with the others?

- a) index
- b) glossary
- c) chapter
- d) book

10. Who was the first recipient of the Arjuna Award?

- a) Kapil Dev
- b) Mohinder Amarnath
- c) Major Dhyan Chand
- d) Vikas Krishan

Subject Based :

11. The Temperature at which iron ceases to be ferromagnetic and becomes paramagnetic

- a) Curie-Weiss point
- b) Ferro-paramagnetic point
- c) Thermo-magnetic point
- d) Curie point

12. The maximum permissible time of de-energization of the faulty circuit is dependent on

- a) voltage of the system
- b) the number of conductors involved
- c) load carried by the faulty circuit
- d) fault current and its duration

13. With reference to nano materials, the prefix nano stands for

- a) Nano centimetre
- b) Nano micrometre
- c) Nanometre
- d) Nano millimetre

14. When the voltage sources are replaced with short circuits and current sources are replaced with open circuits, leaving dependent sources in the circuit, the theorem applied is

- a) Superposition
- b) Thevenin
- c) Norton
- d) Millman

15. The maximum power is delivered from a source to a load when the source resistance

- a) Greater than the load resistance
- b) Less than the load resistance
- c) Equal to zero
- d) Equal to the load resistance

16. A filter that allows high and low frequencies to pass but attenuates any signal with a frequency between two corner frequencies is a

- a) Notch filter
- b) Band stop filter
- c) Band pass filter
- d) Multiband filter

17. When an information signal is multiplied by an auxiliary sinusoidal signal to translate its frequency, the modulation is called

- a) Phase modulation
- b) Amplitude modulation
- c) Frequency modulation
- d) Quadrature amplitude modulation

18. Consider the following statements:

1. The rules for series and parallel combinations of capacitors are opposite to those for resistors.
2. The rules for series and parallel combinations of inductors are same as those for resistors.
3. An inductor is a short circuit to dc currents.

Which of the above statements are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

19. Which one of the following material is used for the swamping resistance of moving coil instruments?

- a) Carbon
- b) Manganin
- c) Silver
- d) Brass

20. The ramp type digital voltmeter can measure accurately with

- a) A positive going ramp voltage only
- b) A negative or positive going linear ramp voltage
- c) A negative going ramp voltage only
- d) An asymptotic ramp voltage only

21. A 0 - 150 V voltmeter has a guaranteed accuracy of 1% full scale reading. The voltage measured by this instrument is 83 V. The limiting error will be nearly.

- a) 1.2%
- b) 2.4%
- c) 1.8%
- d) 3.2%

22. The decimal equivalent of binary number 1001.101 is

- a) 9.750
- b) 10.750
- c) 9.625
- d) 10.925

23. The important fact about the collector current is:

- a) It is greater than emitter current.
- b) It equals the base current divided by the current gain
- c) It is small.
- d) It approximately equals the emitter current

24. The disadvantage of a typical MOSFET as compared to BJT is

- a) Increased power-handling levels
- b) Reduced power-handling levels
- c) Increased voltage-handling levels
- d) Reduced voltage-handling levels

25. A negative feedback amplifier where an input current controls an output voltage is called

- a) Current amplifier
- b) Transresistance amplifier
- c) Transconductance amplifier
- d) Voltage amplifier

26. The cross-magnetizing effect of the armature reaction can be reduced by

- a) making pole shoes flat faced.
- b) making the main field ampere-turns larger compared to the armature ampere turns.
- c) increasing the flux density under one half of the pole.
- d) keeping the direction of rotation of generator in the same direction as motor.

27. Cogging in an induction motor is caused

- a) if the number of stator slots are unequal to number of rotor slots.
- b) if the number of stator slots are an integral multiple of rotor slots.
- c) if the motor is running at fraction of its rated speed.
- d) due to 5th harmonic.

28. The disadvantages of hunting in synchronous machines is

- a) fault occurs in the supply system.
- b) causes sudden change in inertia.
- c) causes large mechanical stresses and fatigue in the rotor shaft.
- d) causes harmonics.

29. Consider the following properties regarding insulation for cables:

- 1. A low specific resistance
- 2. High temperature withstand
- 3. High dielectric strength

Which Of the above properties Of insulation are correct while using cables?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

30. Which one of the following faults occurs most frequently in a power system?

- a) Grounded star-delta
- b) LL-G faults
- c) Double line faults
- d) Single line-to-ground (LG) faults

31. The resistance of a Cu wire is R ohm. The wire is stretched to it' s double length. The new resistance is

- a) R
- b) 2R
- c) 4R
- d) R/2

32. What is the purpose of a Transistor in Electronic Circuits

- a) To regulate voltage
- b) To store data
- c) To filter noise
- d) To amplify electronic signals

33. If field current is decreased in DC Shunt Motor, it's speed will be

- a) Remains same
- b) Increases
- c) Decreases
- d) None of the above

34. Superposition Theorem is only applicable for

- a) Linear Network
- b) Non-linear Network
- c) Both of above
- d) None of above

35. Eddy Current Loss depends on

- a) Frequency
- b) Flux Density
- c) Thickness
- d) All of the above

36. Behaviour of conductors, semi-conductors and insulators is explained on the basis of

- a) Atomic structure
- b) Molecular structure
- c) Energy band structure
- d) All of the above

37. Volt-box is basically a device used for

- a) Measuring the voltage
- b) Extending the range of voltmeter
- c) Extending the voltage range of the potentiometer
- d) Measuring power

38. In a low power factor wattmeter sometimes compensating coil is connected in order to

- a) Neutralize the capacitive effect of pressure coil
- b) Compensate for inductance of pressure coil
- c) Compensate for power loss in the pressure coil
- d) Reduce the error caused by eddy current

39. A 4 pole Dc generator has 400 wave winding connected conductors. The flux per pole is 0.01 Wb. If the generated voltage is 200 volts, then the speed of the generator will be

- a) 150 rpm
- b) 1500 rpm
- c) 750 rpm
- d) 3000 rpm

40. Given $V_{TH} = 20 \text{ v}$ and $R_{TH} = 5 \text{ Ohm}$. The current in the load resistance of a network

- a) Is 4 A
- b) Is more than 4 A
- c) Is less than 4 A
- d) Is 4 A or more

41. In case of a transmission line, the purpose of transposition of unsymmetrical conductors is to

- a) Reduce corona
- b) Reduce skin effect
- c) Reduce resistance
- d) Balance line voltage drop.

42. Short circuit test in a transformer is performed to find the

- a) Copper loss
- b) Eddy current loss
- c) Hysteresis loss
- d) Iron loss

43. High starting torque can be obtained in:

- a) Slip ring Induction motor.
- b) Squirrel cage induction motor
- c) Salient pole Alternator
- d) Non-Salient pole Alternator

44. In an Induction motor, when slip is 1, the rotor speed N is

- a) Less than the synchronous speed
- b) Equal to zero
- c) More than the synchronous speed
- d) Equal to the synchronous speed

45. Which of the following materials offers the largest value of dielectric constant?

- a) Air
- b) Paper
- c) Teflon
- d) Silicon

46. A conductor that connects the distribution sub-station to the area where power is to be distributed is known as

- a) Distributor
- b) Service mains
- c) Earth conductor
- d) Feeder

47. In a DC 2-wire feeder, the drop per feeder conductor is 2%. Find the transmission efficiency of the feeder?

- a) 99%
- b) 98%
- c) 96%
- d) 94%

48. Which of the following is a 3-layer, 2-terminal device?

- a) TRIAC
- b) SCR
- c) GTO
- d) Power Diode

49. A transformer is used to change the value of?

- a) Power factor
- b) Power
- c) Frequency
- d) Voltage

50. Which one of the following is not required for power diode?

- a) High speed operation
- b) Small recovery time
- c) Fast communication
- d) Low on-state voltage drop
