



# COCHIN SHIPYARD LIMITED

(A Govt. of India Enterprise)  
KOCHI -15

## **OBJECTIVE TYPE WRITTEN TEST TO THE POST OF SENIOR PROJECT OFFICER (MECHANICAL) FOR CANSRU**

**DATE: 14.06.2024**

**DURATION OF THE TEST : 60 Minutes**  
**MAXIMUM MARKS : 50 Marks**

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

### **GENERAL INSTRUCTIONS**

1. **ANSWER ALL QUESTIONS.** There shall be no negative marks.
2. **Answers are to be marked using ✓ mark against the most appropriate option among the options provided in the Question Booklet using BALL POINT PEN.**
3. 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.
4. **Calculators, Mobile, Electronic items etc., are not permitted inside the examination hall.**
5. Candidates seeking, receiving and /or giving assistance during the test will be disqualified.
6. The right to exclude any question (s) from final evaluation rests with CSL.
7. 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.**

<b>Name of Candidate</b>	
<b>Registration No.</b>	
<b>Name of Post</b>	
<b>Signature of candidate</b>	
<b>Signature of invigilator</b>	

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

**PHASE I**  
**OBJECTIVE TYPE TEST FOR THE POST OF SENIOR PROJECT OFFICER**  
**(MECHANICAL) FOR CANSRU**

**I. GENERAL KNOWLEDGE**

**1. Which of the books is written by Kapil Dev?**

- a) One day Wonders
- b) Cricket - My Style**
- c) Twenty Years at the top
- d) Cricket-Favourite Game

**2. DRDL stands for.....**

- a) Defence Research and Development Laboratory**
- b) Department of Research and Development Laboratory
- c) Differential Research and Documentation Laboratory
- d) None of the above

**3. The famous Rock Garden is located in which city?**

- a) Jaipur
- b) Simla
- c) Lucknow
- d) Chandigarh**

**4. October 24 is observed as .....**

- a) World Vegetarian Day
- b) United Nations Day**
- c) World Immunization Day
- d) World Environment Day

5. What is the capital of Syria?

- a) Damascus
- b) Bahrein
- c) Adis Ababa
- d) Doha

6. Which foreign country is closest to Andaman Islands?

- a) Sri Lanka
- b) Indonesia
- c) Myanmar
- d) Pakistan

7. Which kind of power accounts for the largest share of power generation in India?

- a) Hydro - electricity
- b) Thermal
- c) Nuclear
- d) Solar

8. Union Budget is always presented first in \_\_\_\_\_

- a) The Lok Sabha
- b) The Rajya Sabha
- c) Joint session of the Parliament
- d) Meeting of the Union Cabinet

9. Who is the guardian of fundamental Rights enumerated in Indian Constitution?

- a) Supreme Court
- b) Parliament
- c) Constitution
- d) President

**10. Who is known as the ' Saint of the gutters ' ?**

- a) B.R.Ambedkar
- b) Mother Teresa**
- c) Mahatma Gandhi
- d) Baba Amte

**II. SUBJECT BASED**

**11. Which law states that the total energy of an isolated system remains constant over time?**

- a) Newton's First Law
- b) Newton's Second Law
- c) Law of Conservation of Energy**
- d) Boyle's Law

**12. What is the function of a flywheel in a machine?**

- a) To store energy
- b) To increase torque**
- c) To decrease speed
- d) To control temperature

**13. What is the maximum efficiency of a heat engine operating between two thermal reservoirs at different temperatures?**

- a) 100%
- b) 50%
- c) 75%
- d) Depends on the temperatures of the reservoirs**

**14. Which of the following materials has the highest melting point?**

- a) Copper
- b) Aluminum
- c) Tungsten**
- d) Lead

**15. Which type of gearbox is used to change the direction of rotation of a shaft?**

- a) Planetary gearbox
- b) Worm gearbox
- c) Bevel gearbox**
- d) Helical gearbox

**16. Which law states that the pressure exerted by a confined fluid is transmitted undiminished in every direction throughout the fluid?**

- a) Pascal's Law**
- b) Archimedes' Principle
- c) Bernoulli's Principle
- d) Boyle's Law

**17. What is the process of converting a solid directly into a gas without passing through the liquid state called?**

- a) Sublimation**
- b) Evaporation
- c) Condensation
- d) Deposition

**18. What is the name of the process by which metals are heated to high temperatures and then cooled to remove internal stresses and improve their hardness?**

- a) Tempering
- b) Annealing
- c) Quenching**
- d) Normalizing

**19. What is the primary function of a compressor in a refrigeration cycle?**

- a) To increase the pressure of the refrigerant**
- b) To decrease the pressure of the refrigerant
- c) To regulate the flow of refrigerant
- d) To cool the refrigerant

**20. Which of the following is not a method of non-destructive testing (NDT)?**

- a) Ultrasonic Testing
- b) Magnetic Particle Testing
- c) X-ray Testing
- d) Tensile Testing**

**21. What is the term for the ratio of the heat capacity of a substance to the heat capacity of water?**

- a) Specific Heat**
- b) Heat Transfer Coefficient
- c) Thermal Conductivity
- d) Latent Heat

**22. What is the primary function of a governor in an engine?**

- a) To regulate the fuel supply
- b) To control the speed**
- c) To maintain the lubrication
- d) To cool the engine

**23. Which type of bearing consists of two concentric rings, one of which rotates while the other remains stationary?**

- a) Plain bearing
- b) Roller bearing
- c) Thrust bearing
- d) Sleeve bearing**

**24. What is the process of removing unwanted material from a workpiece using a rotating cutting tool called?**

- a) Drilling
- b) Milling**
- c) Grinding
- d) Turning

**25. What is the term for the tendency of a body to resist angular acceleration?**

- a) Inertia
- b) Momentum
- c) Torque
- d) Angular velocity

**26. Which of the following is not a type of heat exchanger?**

- a) Shell and Tube
- b) Plate Heat Exchanger
- c) Spiral Heat Exchanger
- d) Linear Heat Exchanger

**27. What is the term for the maximum stress a material can withstand without breaking?**

- a) Yield strength
- b) Ultimate strength
- c) Tensile strength
- d) Elastic limit

**28. What is the term for the ability of a material to plastically deform before fracturing?**

- a) Ductility
- b) Brittleness
- c) Hardness
- d) Toughness

**29. What is the term for the ratio of the volume of water vapor present in the air to the maximum possible volume of water vapor at that temperature?**

- a) Humidity
- b) Relative humidity
- c) Absolute humidity
- d) Dew point

**30. What is the term for the ability of a material to absorb energy and plastically deform without fracturing?**

- a) Ductility
- b) Brittleness
- c) Hardness
- d) Toughness

**31. Which principle explains why an airplane wing generates lift?**

- a) Venturi effect
- b) Pascal's principle
- c) Archimedes' principle
- d) Bernoulli's principle

**32. What is the mode of heat transfer through a vacuum?**

- a) Conduction
- b) Convection
- c) Radiation
- d) Advection

**33. Governors are generally used to control the ..... of IC engine?**

- a) Load
- b) Speed
- c) Vibration
- d) None of the above

**34. What is the SI unit of friction?**

- a) Newton
- b) Hz
- c) Nm
- d) No unit



35. Which of the following is NOT a surface hardening method?

- a) Carburizing
- b) Cyaniding
- c) Nitriding
- d) Annealing

36. Water is generally considered as..... Fluid?

- a) Compressible
- b) Incompressible
- c) Ideal
- d) Non-Newtonian

37. A process of coating ..... metal is known as Galvanization?

- a) Tin
- b) Lead
- c) Zinc
- d) Aluminium

38. What is the SI unit of strain?

- a) Kg/Cm<sup>2</sup>
- b) Cm
- c) Newton
- d) None of the above

39. Which of the following is NOT a positive displacement pump?

- a) Gear pump
- b) Screw pump
- c) Centrifugal pump
- d) Diaphragm pump

**40. Which cycle is commonly used in gas power plants?**

- a) Rankine cycle
- b) Stirling cycle
- c) Otto cycle
- d) Brayton cycle**

**41. Which law of thermodynamics is used to determine the thermal efficiency of a heat engine?**

- a) First law of thermodynamics
- b) Second law of thermodynamics**
- c) Third law of thermodynamics
- d) Zeroth law of thermodynamics

**42. What is the role of a heat exchanger in a refrigeration system?**

- a) To generate heat
- b) To compress the refrigerant
- c) To transfer heat between two fluids**
- d) To regulate the refrigerant flow rate

**43. What is the purpose of a camshaft in an automobile engine?**

- a) To control the fuel injection timing
- b) To convert reciprocating motion into rotational motion
- c) To open and close the engine valves**
- d) To provide lubrication for engine components

**44. What is the purpose of a flywheel in a reciprocating engine?**

- a) To store energy and provide a smooth power output**
- b) To increase the compression ratio
- c) To control the fuel injection timing
- d) To provide lubrication for engine components

45. What is the appropriate spanner size of M24 bolt?

a) 12

b) 24

c) 36

d) 48

46. Calculate the approximate weight of steel plate of size 1500mm (L) x 700mm (W) x 6mm (Thk)

a) 50 Kg

b) 63 Kg

c) 500 Kg

d) 630 Kg

47. Which type of gearing is used to transmit power between parallel shafts?

a) Spur gears

b) Helical gears

c) Bevel gears

d) Worm gears

48. What is the equation that relates the pressure, volume, and temperature of a gas?

a) Boyle's law

b) Charles's law

c) Ideal gas law

d) Dalton's law

49. What is the natural frequency of a vibrating system?

a) The frequency at which the system vibrates with the highest amplitude

b) The frequency at which the system oscillates back and forth

c) The frequency at which the system is most stable

d) The frequency at which the system experiences resonance

**50. What is the principle of operation of a centrifugal pump?**

- a) Fluid enters the impeller axially and is discharged radially.
- b) Fluid enters the impeller radially and is discharged axially.
- c) Fluid enters and exits the impeller axially.
- d) Fluid enters and exits the impeller radially.

