

COCHIN SHIPYARD LIMITED

(A Govt. of India Enterprise)

KOCHI -15

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

16 DECEMBER 2023

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

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.

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 PROJECT OFFICER (MECHANICAL) ON
CONTRACT BASIS FOR CKSRU, KOLKATA**

GENERAL KNOWLEDGE

1. Which is the longest river on the earth?
 - a) Mississippi-Missouri River
 - b) Amazon River
 - c) Nile river
 - d) None of the above

2. Gateway of India is located at?
 - a) Mumbai
 - b) New Delhi
 - c) Kolkata
 - d) Bangalore

3. Name of the India's first indigenously built Aircraft carrier?
 - a) INS Magar
 - b) INS Kumbhir
 - c) INS Kesari
 - d) IAC Vikrant

4. Paradip Port is located in which state?
 - a) West Bengal
 - b) Jharkhand
 - c) Odisha
 - d) Bihar

5. World Quality Day is observed every year on?

- a) 2nd Monday of November
- b) 2nd Wednesday of November
- c) 2nd Saturday of November
- d) 2nd Thursday of November

6. Who is the current Union Minister for Ports, Shipping and Waterways ?

- a) Shri Jyotiraditya M. Scindia
- b) Shri Arjun Munda
- c) Shri Sarbananda Sonowal
- d) Shri Hardeep Singh Puri

7. What was invented by Alfred Nobel, the founder of the Nobel Prize ?

- a) Dynamite
- b) Gun powder
- c) Electric light
- d) Foot bath

8. The "Commonwealth Games" are normally held every how many years ?

- a) Two
- b) Three
- c) Four
- d) Six

9. The Preamble of the Indian Constitution starts with the phrase ?

- a) "We, the People of India..."
- b) "In the name of God..."

- c) "India, a Sovereign Socialist Secular Democratic Republic..."
- d) "To secure to all its citizens..."

10. Who designed the national flag of India ?

- a) Gopal Krishan Gokhale
- b) Dadabhai Naroji
- c) Pingali Venkayya
- d) Pherozeshah Mehta

SUBJECT BASED

1) An oxidizing flame is produced when oxygen supply is slightly _____ by volume.

- a) More than Acetylene
- b) Less than Acetylene
- c) Equal to Acetylene
- d) None

2) In a centrifugal pump the fluid enters the pump

- a) from the top
- b) from the bottom
- c) from the centre
- d) from sides

3) The operation of forcing additional air under pressure in the engine cylinder is known as

- a) Scavenging
- b) Turbulence

c) Supercharging

d) None

4) From the following, which carbon steel is more weldable.

a) 0.30% Carbon steel

b) 0.15% Carbon steel

c) 1% Carbon steel

d) 0.75% carbon steel

5) Multistage centrifugal pumps are used for which of the following factor?

a) High efficiency

b) High velocity

c) High discharge

d) High head

6) Which of the following defect occurs due to burning away of base metal?

a) Cracking in weld metal

b) Spatters

c) Under cut

d) Inadequate penetration

7) "Action to eliminate the cause of a non-conformity and to prevent recurrence" is called?

a) Corrective action

b) Preventive action

c) Nonconformity

d) Option

8) _____ is the condition of the flame propagating down the hoses of an oxy-fuel welding and cutting system

- a) Explosion
- b) Propagation
- c) Expansion
- d) Flash back

9) A pump transfers input mechanical energy of an engine into _____.

- a) pressure energy of a fluid
- b) kinetic energy of a fluid
- c) both a) and b)
- d) none of the above

10) Which material property refers to the ability of a material to be stretched or drawn into wires without breaking?

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

11) In materials engineering, what is the term used to describe the measure of deformation resulting from the application of stress?

- a) Tensile strength
- b) Elasticity
- c) Strain
- d) Stress

12) Which welding process uses a consumable electrode that also serves as the filler material?

- a) TIG welding
- b) MIG welding
- c) Arc welding
- d) Spot welding

13) What is their primary function of Heat Exchangers?

- a) To generate heat
- b) To store heat
- c) To transfer heat between two fluids
- d) To reduce heat

14) Turbulent flow in a fluid system is characterized by:

- a) Smooth and predictable flow patterns
- b) High fluid viscosity
- c) Chaotic and irregular flow patterns
- d) Low fluid velocity

15) The point of contact between a gear and a tooth on another gear is called the:

- a) Pitch circle
- b) Addendum circle
- c) Dedendum circle
- d) Base circle

16) Which of the following instruments is used to measure the pressure of a fluid?

- a) Tachometer
- b) Manometer
- c) Flowmeter
- d) Pyrometer

17) The process of removing material from a workpiece using a cutting tool to create a desired shape is called:

- a) Drilling
- b) Turning
- c) Boring
- d) Machining

18) Which type of pump is commonly used for pumping water from wells and is known for its ability to handle a wide range of flow rates?

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

19) Maintenance consists of the following actions?

- a) Replacement of components
- b) Repair of components
- c) Service of components
- d) All of the above

20) S.W.L means?

- a) Standard working load
- b) Safe working load
- c) Side working load
- d) Stable working load

21. In water cooling, water in the jacket obtain heat from the cylinder due to ?

- a) Conduction
- b) Convection
- c) Radiation
- d) All of the above

22. The most effective method in removing water from diesel fuel oil is by ?

- a) Using it in the engine
- b) Heating the fuel tanks
- c) Centrifuging the fuel
- d) Straining the fuel

23. The important mechanical property for a material to be successfully rolled or forged is ?

- a) Brittleness
- b) Malleability
- c) Ductility
- d) Elasticity

24. When is a fluid called turbulent?

- a) The viscosity of the fluid is high

- b) Reynolds number is less than 2000
- c) Reynolds number is greater than 2000
- d) The density of the fluid is low

25. Which of the following welding process uses non-consumable electrodes ?

- a) TIG welding
- b) MIG welding
- c) Shielded metal arc welding
- d) Submerged arc welding

26. Arc stability is better with ?

- a) AC welding
- b) DC welding
- c) Both AC and DC welding
- d) Rectified supply

27. Pickling treatment is cleaning the casting with ?

- a) Soda ash
- b) Iron shots
- c) Compressed air and sand particles
- d) Dilute acid

28. Specific speed of pump is higher in ?

- a) Radial flow
- b) Axial flow
- c) Mixed flow
- d) None of the above

29. The capacity of centrifugal pump is increased by increasing the ?

- a) Impeller diameter
- b) Speed
- c) Number of pumps and joining them in parallel
- d) All of the above

30. What is the purpose of using a refrigerant compressor ?

- a) Raise the temperature of refrigerant
- b) Reduce the temperature of refrigerant
- c) Reduce the pressure of refrigerant
- d) Expand the refrigerant

31. Both pressure and velocity of steam drops in the moving blades of ?

- a) Impulse turbine
- b) Velocity compounded impulse turbine
- c) Reaction turbine
- d) Pressure compounded impulse turbine

32. The diesel engine works under ?

- a) Constant pressure cycle
- b) Rankine cycle
- c) Carnot cycle
- d) Constant volume cycle

33. The valve mechanism in engine is operated by ?

- a) Crankshaft

- b) Timing gear
- c) Flywheel
- d) Camshaft

34. In oxy-acetylene welding a neutral flame is obtained by supplying ?

- a) excess volume of oxygen over acetylene
- b) excess volume of acetylene over oxygen
- c) equal volume of oxygen and acetylene
- d) none of the above

35. A tensile test is performed on a round bar. After fracture, it has been found that the diameter remains approximately same at fracture. Which is the material under test?

- a) Mild steel
- b) Cast iron
- c) Copper
- d) Aluminium

36. If carbon content of steel is increased, which of the following parameter of steel will be reduced?

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

37. Which of the following will happen in a transformer when the number of secondary turns is less than the number of primary turns ?

- a) The voltage gets stepped up
- b) The voltage gets stepped down
- c) The power gets stepped up
- d) The power gets stepped down

38. What is the composition of gun metal ?

- a) Lead and Nickel
- b) Copper, Zinc and Nickel
- c) Copper, Tin and Zinc
- d) Lead and Zinc

39. What is the bore diameter of bearing 6210 ?

- a) 20
- b) 10
- c) 62
- d) 50

40. When will a submerged body be stable ?

- a) Centre of buoyancy is above its centre of gravity
- b) Centre of gravity is above its centre of buoyancy
- c) Meta centre is above its centre of gravity
- d) Meta centre is above its centre of buoyancy
