Question Booklet No.	004225

Skill Development and Entrepreneurship Department
Directorate of Vocational Education and Training
Directorate of Skill Development, Employment and Entrepreneurship
Question Paper Group Name: MECHANICAL-4
Question Paper Post Names: Craft Instructor – Machinist, Machinist-Grinder

Duration: 60 Minutes | Total Questions: 40

INSTRUCTIONS

1. This Question Paper Booklet contents 40 mandatory questions. Candidate should check the Question Paper Booklet and ensure that it contents all pages and questions before starting to answer. If candidate finds any problem pertaining to printing/ binding/ incomplete pages etc, candidate should immediately get the Question Paper replaced from the Invigilator.
2. Candidate has to write his/ her seat number in this block.

3. The Question Booklet Number as printed above should be mentioned at the appropriate place on the OMR Answer Sheet.
4. All the Questions are provided with 4 options as 1, 2, 3 and 4. Candidate should select the most correct Option and mention the Option Number on the OMR Answer Sheet in front of the respective Question Number by **fully shading the Option Number with BLACK INK BALL POINT PEN Only.**
5. All Questions carry equal marks i.e. 1 Question has a weightage of 1 marks. Candidate should mind the available time for the examination and solve the questions accordingly.
6. The option shaded once on the OMR Answer Sheet should not be roughed or in any other way changed. Thus candidate should take utmost care while marking their options on OMR Answer Sheet. Such changes if any or any attempt to rough/ change options shall not be checked by the authorities.
7. Marks shall be awarded to the correct answers only during the evaluation of the OMR Answer Sheet. No marks shall be deducted for registering wrong answers (shading wrong option) or not attempting questions. Thus there is NO **NEGATIVE MARKING SYSTEM**.
8. All the rough work has to be done on the sheet provided for Rough Work in the Question Booklet only. Writing anything on the Question Paper Booklet, OMR Answer Sheet or any other Paper Sheet shall be treated as an unfair means and entitle for action under **"Prohibition of Unfair Practices during examination Ordinance – 1982"**.
9. Method of Shading the Correct Option on the OMR Answer Sheet:

Q.No. 25.How many Centimeters make 1 Meter?

(1)	10	(2)	100
(3)	1000	(4)	10000

The Correct Option for this Question is (1) and hence the (2) option on the OMR Answer Sheet in front of Question Number 25 has to be shaded as following

Correct Method of Shading

Wrong Method of Shading

USE ONLY BLACK INK BALL POINT PEN FOR SHADING

IMPORTANT

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THIS QUESTION PAPER BOOKLET AND PART – 1 OF OMR ANSWER SHEET HAVE TO BE SUBMITTED TO THE INVIGILATOR AFTER THE EXAMINATION.

1. The angle between the face and flank of a single point cutting tool is known as

1. Rake angle
2. Clearance angle
3. Lip angle
4. Point angle

2. Which of the following method is used in mass production for producing small length of taper?

1. Tailstock offset method
2. Form tool method
3. Taper turning attachment
4. Compound slide method

3. Which type of lathe centres used for minimum wear and strain in case of taper turning by tail stock offset method.

1. Half centre
2. Pipe centre
3. Ordinary centre
4. Ball centre

4. In planer

1. Tool is stationary and work reciprocate
2. Work is stationary and tool reciprocate
3. Tool moves over stationary work
4. Tool moves over reciprocating work

5. What type of form of threads used in power presses and screw jacks for power transmission?

1. Knuckle thread
2. British association thread
3. Square threads
4. Vee threads

6. Which type of file is used for filling narrow grooves and angle above 10°?

1. Round file
2. Knife-edge file
3. Triangular file
4. Square file

7. Name the operation of enlarging hole to a given depth, to house heads of socket heads or cap screws.

1. Counter boring
2. Spot facing
3. Counter sinking
4. Reaming

8. Which angle is meant to prevent the friction of tool behind the cutting edge?

1. Chisel edge angle
2. Helix angle
3. Point angle
4. Clearance angle

9. The unequal angle of the cutting edges causes following defects in drilling.

1. Overheated drills
2. Oversized holes
3. Rough holes
4. Split web

10. Which die is not to be used for cutting new thread?

1. Circular split die
2. Die nut
3. Adjustable screw plate die
4. Half die

11. What type of tongs round rods horizontally?

1. Hollow tongs
2. Flat tongs
3. Round tongs
4. Square mouth tongs

12. Tempering is the heat treatment process followed by which heat treatment.

1. Hardening
2. Annealing
3. Normalizing
4. None of the above

13. To reduce ductility in steel which type of heat treatment process used?

1. Annealing
2. Normalizing
3. Flame hardening
4. Induction hardening

14. The crank mechanism is incorporated to convert the rotary motion of the large bull gear to reciprocating motion for the ram.

1. Milling machine
2. Drilling machine
3. Slotting machine
4. Shaper machine

15. Cast iron is an alloy of iron carbon which content carbon percentage in the range of

1. 2 to 4 %
2. 1 to 2%
3. 0.1 to 0.8 %
4. None of the above

16. It is the property of metal to withstand shock and impact known as

1. Malleability
2. Hardness
3. Toughness
4. Brittleness

17. Which is the property of metal by which it can be permanently extended in all directions without rupture by hammering, rolling to change its size and shape?

1. Hardness
2. Toughness
3. Malleability
4. Brittleness

18. The mixture of 90% copper and 10% tin is known as

1. White metal
2. Bronze
3. Gun metal
4. Brass

19. The mixture of Tin 85%, copper 5% and antimony 10% is known as

1. Brass
2. Phosphor bronze
3. White metal
4. Gun metal

20. Select a plier for shearing off wires in confined spaces and cutting of wires close to surface level.

1. Slip joint pliers
2. Circlip pliers
3. Locking pliers
4. Side cutting pliers

21. Which operation is performed to remove burns and sharp edges from the turned components to make their handling safe on lathe machine?

1. Chamfering
2. Facing
3. Turning
4. None of the above

22. Which lath accessory is used to give extra support for long slender work piece in addition to the centre support during turning?

1. Follower steady rest
2. Face plate
3. Fixed steady rest
4. None of the above

23. The vernier bevel protractor is a precision instrument meant for measuring angles to an accuracy of

1. 1 minutes
2. 3 minutes
3. 5 minutes
4. 10 minutes

24. For good hand grip for various hand tools and machine parts following operation should be performed.

1. Chafering
2. Knurling
3. Facing
4. All above operations

25. What does the below sign indicate 

1. Rise of fire
2. Toxic hazard
3. Risk of explosion
4. Overhead hazard

26. Which is the following type of files are useful for filing soft metals like brass, aluminum, bronze and copper?

1. Double cut
2. Single cut
3. Curved cut
4. Flat file

27. Name the imaginary circle on which two mating gears seems to be rolling

1. dedendum circle
2. Addendum circle
3. Pitch circle
4. Clearance circle

28. The radical distance between the pitch circle and the root circle is known as

1. Dedendum
2. Addendum
3. Clearance
4. Tooth thickness

29. For large speed reduction following types of gears are used

1. Bevel gears
2. Worm gear
3. Spur gear
4. Annular gear

30. In order to obtain surface finish in the range of 0.75 ril to 1.25 rim, the operation used is

1. Grinding
2. Lapping
3. Honning
4. Burning

31. Which type of grinding wheel is used to grind soft materials?

1. Coarse grained
2. Medium grained
3. Fine grained
4. None of the above

32. The structure of grinding wheel depends upon

1. Hardness of the material being ground
2. Nature of grinding operation
3. Finish required
4. All of these

33. Give the workholding devices used in grinding operation

1. Magnetic chuck
2. Vice
3. Angle plates
4. All of these

34. Which of the following wheel speed required in M/S for grinding rough grinding wheels with vitrified bond.

1. 25
2. 45
3. 20-25
4. 20-35

35. What is the depth of cut in mm for finish cut in grinding operation?

1. 0.02 to 0.03
2. 0.005 to 0.01
3. 2 to 3
4. 0.5 to 1

36. Climb milling is chosen while machining because

1. The chip thickness increases gradually
2. It enables the cutter to dig in and start the cut
3. The specific power consumption is reduced
4. Better surface finish can be obtained

37. In which operation, the cutting force is maximum when the tooth begins its cut and reduces it to minimum when the tooth leaves the wonk.

1. Up milling
2. Down milling
3. Face milling
4. End milling

38. Which bearing material widely used for light loading applications?

1. Nylon
2. Teflon
3. Cast iron
4. White metal

39. Which drive is used for transmission of motion at a constant velocity ratio?

1. Open belt drive
2. Cross belt drive
3. Chain drive
4. Rope drive

40. Which type fit is expected between pair of bush bearing and shaft running in it?

1. Clearance fit
2. Interference fit
3. Transition fit
4. All of these