



భారతీయ సాంకేతిక విజ్ఞాన సంస్థ హైదరాబాద్
भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad

Advt. No. IITH/2023/NF/15

Question Paper Code:

Application Number of the Candidate

Name of the Post: Junior Technician-Central Workshop (15.5)
(CNC programming and Operation)

Pay Level: 03

Date & Time of the Exam: 6 Dec 2023, 11.00 am

Duration: 01 hr. 30 min

Scheme of the Exam:

Topic	Number of Question	Marks
General English (Communication Skills)	8	8
General Arithmetic		
Reasoning		
Work Related Topics	32	32

Instructions to fill the responses in the OMR answer sheet:

1. Candidate must write his/her **application number** in the designated box on the top of OMR answer sheet.
2. Candidates must write the post code and Question paper code in the designated boxes on the top of OMR answer sheet.
3. Candidates must sign in the box provided in the OMR answer sheet.
4. Each answer sheet must be signed by the invigilator in the space printed in the OMR answer sheet.
5. Only one response to be selected & marked. In case more than one response is marked for a single question or no response is marked for a question, no marks will be awarded for that question.
6. Partially filled circles shall not be considered as responses.
7. Erasing or changing of answer is not allowed.
8. No negative marking
9. Candidate must use Blue/Black ball point pen to fill his/her responses.
10. Rough work should not be done on the OMR answer sheet.
11. Candidates can use the designated page(s) of the question booklet for the purpose of rough work.

1	Choose suitable "wh" word for the given sentence_ " _____ were you angry?"
A	Which
B	Why
C	Who
D	What

2	Which one is NOT a vowel?
A	A
B	E
C	O
D	X

3	Choose the correct tense of the verb. "I _____ music next year."
A	learn
B	am learning
C	will not be learning
D	learnt

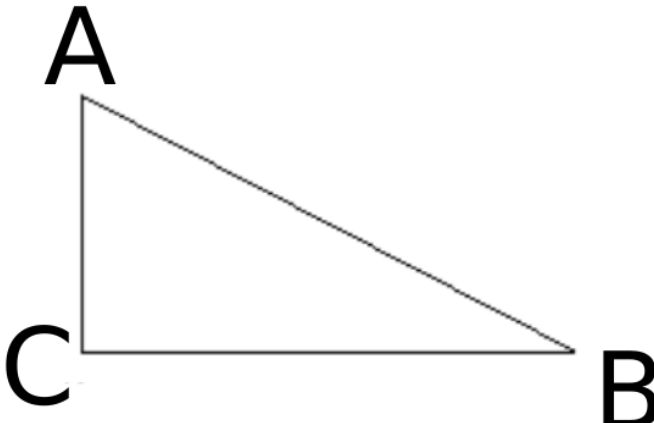
4	Fill in the blank with comparative adjectives. "Your AC is _____ than mine".
A	cool
B	cooler
C	coolest
D	cooling

5	Fill in the blank with correct word "They _____ good friends"
A	is
B	am
C	will never be
D	was

6	Which of the below are not fundamental units?
A	Length, Mass, Volume
B	Length, Mass, Area
C	Length, Pressure, Volume
D	All of the above

7	What is not the unit of mass?
A	Ampere
B	Coulomb
C	Volts
D	All of the above

8	What is the x value for $x^2 + 66 = 130$?
A	4
B	6
C	8
D	10

9	<p>If the angle CBA is 30 degrees and if the length AC is 6 cm, what is AB?</p> 
A	3 cm
B	6 cm
C	12 cm
D	24 cm

10	How many days will an electrician take to solder 64 circuits if he solders 8 circuits in 4 days?
A	8 days
B	16 days
C	24 days
D	32 days

11	Which code is used for "Circular interpolation clockwise direction"?
A	G01
B	G02
C	G03
D	G00

12	What is force per unit area called as?
A	Stress
B	Strain
C	Poisson's ratio
D	Factor of safety

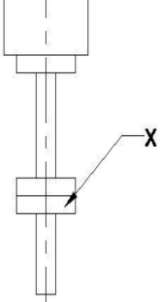
13	Which of the below is an important part of a CNC machine?
A	ATC
B	ATM
C	UTM
D	UTC

14	Which motor does not controls the axes of a CNC machine?
A	Air motor
B	DC series motor
C	Hydraulic motor
D	All of the above

15	Which code describes the auxiliary function of a CNC machine?
A	N - words
B	F - words
C	A - words
D	None of the above

16	What is "G40" in program?
A	Cutter radius compensation lift
B	Cutter compensation cancel
C	Cutter radius compensation right
D	Cutter offset outside complex

17	Which method is used to avoid machine collision in VMC during initial practice?
A	Simulation
B	Using G and M codes
C	Using ATC
D	Using UTM

18	<p>What is marked as 'x' with reference to CNC machine?</p> 
A	Test arbor
B	Edge finder
C	Cutter arbor
D	Boring bar

19	Which mode is used to enter part program in VMC?
A	EDIT
B	JOG
C	MDI
D	Auto

20	CNC systems use the following G code for absolute dimensioning?
A	G91
B	G01
C	G03
D	G90

21	MO6 represents the following instruction in CNC programming
A	Program stop
B	Tool change
C	Coolant on
D	Spindle on

22	For a CNC machine command, S3820 means specification of
A	Feed rate
B	Spindle speed
C	Depth rate
D	Line number

23	In a CNC Program Block N10 G02 G91 X 52 Z 25 G02 represents:
A	Circular clockwise interpolation
B	Linear interpolation
C	Incremental command
D	Absolute command

24	Which is the thread cutting cycle on CNC lathe?
A	G01
B	G32
C	G37
D	G36

25	Which is the drilling cutting cycle?
A	G01
B	G11
C	G83
D	G32

26	In a CAD Package, Clockwise circular arc radius 5, specified from P1(15,10) to P2 (10, 15) will have its centre at :
A	None of the below
B	(15,10)
C	(15,15)
D	(10,15)

27	CNC machining centres do not include operations like _____
A	Milling
B	Boring
C	Welding
D	Tapping

28	NC contouring is an example of
A	continuous path positioning
B	point-to-point positioning
C	absolute positioning
D	incremental positioning

29	Which kind of switches examine or detect the presence of an item or object without making contact with them?
A	Proximity Switches
B	Mechanical Switches
C	All of the above
D	None of the above

30	The fourth axis of a CNC machine refers to rotation about
A	x-axis
B	y-axis
C	z-axis
D	None

31	A 3-axis CNC machine is used for
A	Drilling holes & milling slots
B	Milling slots and cutting sharp edges
C	Both (a) & (b)
D	None

32	Which of the following is used to guide the tool and hold the job in mass production?
A	Gauge
B	Jig
C	Fixture
D	Housing

33	A small headless screw having a slot for allen key is called
A	Set screw
B	Stud
C	Thumb screw
D	Grub screw

34	Which one among the following is correct statement?
A	A clearance fit always provides interference.
B	An interference fit always provides clearance.
C	An interference fit may sometimes provide clearance and sometimes interference.
D	A transition fit may sometimes provide clearance and sometimes interference

35	Izod Test is conducted to measure
A	Tensile Strength
B	Impact Toughness
C	Fatigue Strength
D	Ductility

36	Ultrasonic inspection techniques use _____ waves to detect flaws in welded joints.
A	air
B	light
C	electronic
D	sound

37	Why is the annealing process carried out in steel?
A	To add cutting ability
B	To relieve strain and stress
C	To decrease the hardness and toughness
D	All of the above

38	Which property is necessary for the material of slip gauge block?
A	Hardness
B	Thermal expansion
C	Wear resistance
D	All of the above

39	What is the pitch of multi start thread?
A	Lead / no of starts
B	Lead x no of starts
C	Lead x major diameter
D	Lead x minor diameter

40	When acceleration is _____, velocity of a particle is constant.
A	constant but non zero
B	Zero
C	Minimum
D	Maximum