

Name of the Candidate:

Roll No:

Date: 19-03-2024

BIOMEDICAL TECHNOLOGY WING

Sree Chitra Tirunal Institute for Medical Sciences & Technology
Poojappura, Thiruvananthapuram-695012

**MFCP-Jr. Technical Assistant (Machine Operation) A to Technical
Assistant (Machine Operation)-A.**

Written Examination

Total number of questions: 50

Maximum duration: 60 min

Instructions to Candidates:

1. All questions carry equal marks.
2. For each question, choose the most suitable answer among the choices given and write the corresponding letter A, B, C or D in the box provided at its right side.
3. Make relevant assumptions if necessary.

For office use

--

Marks scored

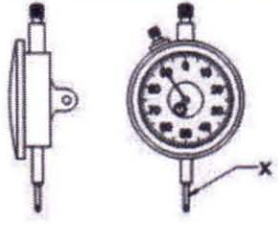


V. Ramesh
19/3/24

Question Paper for MFCP -Jr. Technical Assistant (Machine Operation) A to Technical Assistant (Machine Operation) A.

Date- 19-03-2024

Sl.No	Questions
1.	In Wire cut EDM, the absolute minimum inner corner radius is..... a) the wire radius minus the sparking gap width b) the sparking gap width minus the wire radius c) the wire radius plus the sparking gap width d) double of the wire radius
2.	The crank pin of a shaping machine is set closer to the centre of the bull gear. How does it affect the movement of shaper's ram movement? a) the ram does not move b) the ram movement will be shorter c) the ram movement will be longer d) it does not affect the ram movement.
3.	Which one of the following is used to rectify damaged or rusted threads? a) Die nut b) circular split die c) two-piece die d) thread chaser
4.	An operation performed for enlarging an existing hole up to only a limited length from its one end is called a) Boring b) drilling c) counter boring d) counter sinking.
5.	Which mechanism is used for converting linear motion into rotary motion in plunger dial gauge? a) Rack and scroll mechanism b) Scroll and pinion mechanism c) Rack and pinion mechanism d) Lever and scroll mechanism
6.	Which is the cause of small particles of the material become embedded in the space between the grains of the grinding wheel? a) Glazing b) loading c) Dressing d) Grooving
7.	Down milling is also called..... a) climb milling b) conventional milling c) end milling d) face milling
8.	The abrasive recommended for grinding materials of high tensile strength is..... a) silicon carbide b) sand stone c) aluminium oxide d) diamond
9.	In the drawing the dimension of a shaft is shown $\varnothing 50.00 +0.069/-0.042$ which size of shaft is not within the tolerance a) 50.068 b) 49.957 c) 50.000 d) 49.990
10.	Included angle of Acme thread is a) 60° b) 55° c) 30° d) 45°

V. Ramakrishna

SL.No	Questions
21.	Back gear mechanism provided in the cone pulley head stock to ? a) increase the speed of the spindle b) decrease the speed of the spindle c) change the direction of rotation of the lead screw d) changing the direction of the spindle
22.	The carriage of a lathe travel along which axis ? a) 'B' axis b) 'X' axis c) 'Y' axis d) 'Z' axis
23.	What is the name of part marked as 'X' in plunger type dial test indicator? a) Bezel b) Plunger c) Stem d) Anvil 
24.	What is the name of lathe accessory shown in the picture? a) Lathe travelling steady b) Lathe fixed steady c) Mandrel d) Lathe carrier 
25.	What is the name of the lathe accessory shown in the picture? a) Lathe Mandrel b) Driving plate c) Catch plate d) Magnetic chuck 
26.	The ductile materials, during machining, produces a) continuous chips b) discontinuous chips c) continuous chips with built up edge d) no chip
27.	After originating from a supply spool, the wire in Wire EDM is passed through ____ a) a chamber filled with special stones b) diamond guides c) a furnace d) a container filled with anti-oxidant
28.	As per Indian Standards the grain size '46' comes under the group a) Coarse b) Medium c) Fine d) Very Fine
29.	Which of the following point angles of a twist drill is used for general purpose work in Engineering workshops and Tool room. The function of independent programming of the U & V axes in wire cut EDM machines is a) 128° b) 108° c) 118° d) 138°
30.	Which of the following is not a good quality cutting fluid ? a) High heat absorption b) High flash point c) Good lubricating quality d) High viscosity

V. Ramesh 12/10/24

Sl.No	Questions
31.	Clapper box in shaper is used in order to..... a) to ensure cutting action b) to avoid length of tool c) to lift the tool during return stroke d) to lift the tool during cutting stroke.
32.	Circularity (roundness) of a circle is specified in a drawing as 0.2. It means a) the centre of hole can vary by 0.2 b) the radius of hole can vary by 0.2 c) the diameter of hole can vary by 0.2 d) the entire circle should lie between two concentric circles, which are radially 0.2 apart.
33.	Which of the following cutting condition greatly affects the tool wear ? a) depth of cut b) feed c) cutting speed d) size of the job.
34.	A micrometer having a negative error of 0.03mm shows a reading of 27.32. The correct dimension is..... a) 27.37mm b) 27.35mm c) 27.40mm d) 27.29mm
35.	18-8 Stainless Steel means a) 18% tungsten and 8% chromium b) 18% chromium and 8% cobalt c) 18% chromium and 8% nickel d) 18% nickel and 8% chromium
36.	The programme code for absolute co-ordinate system in CNC is... a) G00 b) G01 c) G90 d) G91
37.	The tool made of cemented carbide wear out faster at a) slow speeds b). medium speeds c) fast speeds d) very fast speed
38.	The amount by which the actual size of a shaft is less than the actual size of mating hole in an assembly a) Clearance b) Interference c) Allowance d) None of the above
39.	Only two perpendicular components of cutting force act on the tool in case of..... Cutting. a) oblique b) orthogonal c) 3d d) Inclined
40.	Determine the height of slip gauges for an angle of 30° using a sine bar of 200mm length a) 100mm b) 150mm c) 200mm d) 250mm

U. R. M. S. K. B. P. K.

Sl.No	Questions
41.	Vernier bevel protractor is a precision instrument meant for measuring angles precisely to an accuracy of a) 1' b) 5' c) 1° d) 5°
42.	Height of the center measured from the bed of the lathe as compared to swing diameter over the bed is a) double b)) four times c) half d) same
43.	In CNC wire cut EDM, the electrical conductivity of the water is maintained by passing the water through the deionization bottle. The electrical conductivity of the water is measured in a) micro Siemens b) pH c) mV d) ppm
44.	Accurate centering of work mounted in an independent chuck can be determined by using a..... a) centre gauge b) height gauge c) dial indicator d) micrometer.
45.	The included angle of the countersinking portion of a centre drill of type 'B' used for protecting the centre hole is: a) 75° b) 90° c) 100° d) 120°
46.	The most important quality of any lubricant is- a) Specific heat b) Viscosity c) Emulsification d) Specific Gravity
47.	For achieving a specific surface finish in a single point turning the most important factor to be controlled is..... a) feed b) cutting speed c) depth of cut d) tool rake angle
48.	What is the first step to stop the CNC machine when an accident happens while working on the machine? a) switch off regulator b) press emergency switch c) reset the machine d) re run the cnc program.
49.	Which G Code description gives maximum spindle speed setting? a) G50 b) G71 c) G72 d) G42
50.	A grinding wheel marked with C is made with theabrasive. a) aluminium oxide b) Silicone carbide c) Diamond d) Corundum

V. Ramesh
19/01/24

**Answer Key – MFCP - -Jr.Technical Assistant (Machine Operation) A
to Technical Assistant (Machine Operation) A.**

Date- 19-03-2024

Question Number	Answer		Question Number	Answer
1	c		26	a
2	b		27	b
3	a		28	b
4	c		29	c
5	c		30	d
6	b		31	c
7	a		32	d
8	c		33	c
9	b		34	b
10	c		35	c
11	b		36	c
12	b		37	a
13	a		38	a
14	c		39	b
15	a		40	a
16	d		41	b
17	c		42	c
18	b		43	a
19	c		44	c
20	c		45	d
21	b		46	b
22	d		47	a
23	b		48	b
24	d		49	a
25	c		50	b

