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CSIR-CLRI Technician

**Previous Year Paper
(Fitter) Part A
2016**



POST CODE - TC(02)

CHEMICAL ENGINEERING PILOT PLANT

PART-A

(FITTER TRADE)

FITTER PART A
Question Paper

Total No., of Questions: 25

Duration: 30 Minutes

1. What is the proper device to hold gear or pulley or lathe _____
a) Steady b) Angle Plate c) Mandrel d) Four Jaw chuck
2. What type of thread lead screw of lathe has _____
a) Square b) Acme c) Whit worth d) Butters
3. What is an angle of angle plate _____
a) 30 degree b) 45 degree c) 60 degree d) 90 degree
4. Which metal is used to make face plate?
a) Carbon Steel b) Tool steel c) Wrought iron d) Cast iron
5. Converting of metal into sheet this property is called _____
a) Plasticity b) Ductility c) Elasticity d) Malleability
6. Which type of bolts is mostly used?
a) Cheese head b) Hook bolt c) Hexagonal bolts d) Eye bolt
7. Which fastener has threading on both sides?
a) Bolt b) Nut c) Screw d) Stud
8. Least count of vernier calliper in metric system _____
a) 0.001 mm b) 0.01 mm c) 0.02 mm d) 0.05 mm



9. In a mild steel the % of carbon _____

- a) 1% to 2% b) 0.05 % to 0.3% c) 0.05 % to 0.7%
d) 0.75% to 1.5%

10. A gear wheel has 36 teeth (z) and 3 mm module (m) its pitch diameter cutter?

- a) 12 mm b) 75 mm c) 80 mm d) 108 mm

11. Which one of the following is incombustible?

- a) H_2 b) CCl_4 c) C_2H_2 d) S

12. Priming is needed in a _____ pump.

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

13. What causes cavitation in centrifugal pump?

- a) High suction pressure b) Low barometric pressure
c) Low suction pressure d) High suction velocity

14. An ideal fluid is

- a) Non-viscous b) Incompressible c) Both (a) & (b)
d) Neither (a) & (b)

15. Check valves are used

- a) At high pressure b) In bends
c) For controlling water flow d) For unidirectional flow

16. Boiler feed water pump is usually a _____ pump.

- a) Reciprocating b) Centrifugal c) Peristaltic d) Multistage centrifugal

17. The steam ejector is used to

- a) Remove condensate from the steam pipelines b) Create vacuum
- c) Superheat the steam d) None of these

18. Which of the following is not used as a medium for high temperature heating?

- a) Dowtherm b) Mercury
- c) Liquid metal (e.g. molten sodium) d) Fused salts

19. The number of kg vaporised per kg of steam fed to the evaporator is

- a) Capacity b) Rate of evaporation c) Economy
- d) Rate of vaporisation

20. Thermal conductivity of a conducting solid material depends upon its

- a) Temperature b) Porosity c) Both (a) & (b) d) Neither (a) nor (b)

21. Finned tube heat exchangers

- a) Give larger area per tube b) Use metal fins of low thermal conductivity
- c) Facilitate very large temperature drop through tube wall
- d) Are used for smaller heat load

22. Short distance transportation of grain, gravel, sand, ash, asphalt etc. is done by using a _____ conveyor.

- a) Flight b) Slat or drag c) Ribbon d) Screw

23. Filter aid is used to

- a) increase the rate of filtration
- b) decrease the pressure drop
- c) increase the porosity of the cake
- d) Act as a support base for the septum

24. Which of the following is not a continuous drier?

- a) Drum drier
- b) Spray drier
- c) Tunnel drier
- d) Tray drier

25. A reactor is generally termed as an autoclave, when it is a

- a) High pressure batch reactor
- b) Atmospheric pressure tank reactor
- c) High pressure tubular reactor
- d) Atmospheric pressure CSTR



PART-A

Total No., of Questions: 25(Answer Key)

Duration: 30 Minutes

1. What is the proper device to hold gear or pulley or lathe _____

- a) Steady b) Angle Plate c) Mandrel d) Four Jaw chuck

Correct Answer: C

2. What type of thread lead screw of lathe has _____

- a) Square b) Acme c) Whit worth d) Butters

Correct Answer: A

3. What is an angle of angle plate _____

- a) 30 degree b) 45 degree c) 60 degree d) 90 degree

Correct Answer: D

4. Which metal is used to make face plate?

- a) Carbon Steel b) Tool steel c) Wrought iron d) Cast iron

Correct Answer: D

5. Converting of metal into sheet this property is called _____

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

Correct Answer: D

6. Which type of bolts is mostly used?

- a) Cheese head b) Hook bolt c) Hexagonal bolts d) Eye bolt

Correct Answer: C

7. Which fastener has threading on both sides?

- a) Bolt b) Nut c) Screw d) Stud

Correct Answer: D

8. Least count of vernier calliper in metric system _____

- a) 0.001 mm b) 0.01 mm c) 0.02 mm d) 0.05 mm

Correct Answer: C

9. In a mild steel the % of carbon _____

- a) 1% to 2% b) 0.05 % to 0.3% c) 0.05 % to 0.7%
d) 0.75% to 1.5%

Correct Answer: B

10. A gear wheel has 36 teeth (z) and 3 mm module (m) its pitch diameter cutter?

- a) 12 mm b) 75 mm c) 80 mm d) 108 mm

Correct Answer: D

11. Which one of the following is incombustible?

- a) H_2 b) CCl_4 c) C_2H_2 d) S

Correct Answer: B

12. Priming is needed in a _____ pump.

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

Correct Answer: C

13. What causes cavitations in centrifugal pump?

- a) High suction pressure b) Low barometric pressure
c) Low suction pressure d) High suction velocity

Correct Answer: C

14. An ideal fluid is

- a) Non-viscous b) Incompressible c) Both (a) & (b)
d) Neither (a) & (b)

Correct Answer: C

15. Check valves are used

- a) At high pressure b) In bends
c) For controlling water flow d) For unidirectional flow

Correct Answer: D

16. Boiler feed water pump is usually a _____ pump.

- a) Reciprocating b) Centrifugal c) Peristaltic d) Multistage centrifugal

Correct Answer: D

17. The steam ejector is used to

- a) Remove condensate from the steam pipelines b) Create vacuum
- c) Superheat the steam d) None of these

Correct Answer: B

18. Which of the following is not used as a medium for high temperature heating?

- a) Dowtherm b) Mercury
- c) Liquid metal (e.g. molten sodium) d) Fused salts

Correct Answer: B

19. The number of kg vaporised per kg of steam fed to the evaporator is

- a) Capacity b) Rate of evaporation c) Economy
- d) Rate of vaporisation

Correct Answer: C

20. Thermal conductivity of a conducting solid material depends upon its

- a) Temperature b) Porosity c) Both (a) & (b) d) Neither (a) nor (b)

Correct Answer: C

21. Finned tube heat exchangers

- a) Give larger area per tube b) Use metal fins of low thermal conductivity
- c) Facilitate very large temperature drop through tube wall
- d) Are used for smaller heat load

Correct Answer: A

22. Short distance transportation of grain, gravel, sand, ash, asphalt etc. is done by using a _____ conveyor.

- a) Flight b) Slat or drag c) Ribbon d) Screw

Correct Answer: D

23. Filter aid is used to

- a) increase the rate of filtration
- b) decrease the pressure drop
- c) increase the porosity of the cake
- d) Act as a support base for the septum

Correct Answer: C

24. Which of the following is not a continuous drier?

- a) Drum drier
- b) Spray drier
- c) Tunnel drier
- d) Tray drier

Correct Answer: D

25. A reactor is generally termed as an autoclave, when it is a

- a) High pressure batch reactor
- b) Atmospheric pressure tank reactor
- c) High pressure tubular reactor
- d) Atmospheric pressure CSTR

Correct Answer: A



1. The brain of any computer system is

- a. ALU
- b. Memory
- c. CPU
- d. Control unit

2. A binary language consists of _____ digits.

- a. 8
- b. 2
- c. 26
- d. 9

3. Which is not application software?

- a. Windows NT
- b. Page maker
- c. Win Word XP
- d. Photoshop

4. Stack is also called as

- a. Last in first out
- b. First in last out
- c. Last in last out
- d. First in first out

5. URL stands for

- a. Unique reference label
- b. Uniform reference label
- c. Uniform resource locator
- d. Unique resource location

6. To join the internet, the computer has to be connected to a

- a. internet architecture board
- b. internet society
- c. Internet service provider
- d. Non of the mentioned

COMPUTER PART A
POST CODE - TC 03 (COMPUTER)
PART A

-|-



7. In binary search the elements should be in
- unsorted array
 - Sorted array
 - Tree
 - All the above
8. How many layers does OSI Reference model has?
- 4
 - 5
 - 6
 - 7
9. An attribute of one table matching the primary key of another table is
- primary key
 - Foreign key
 - composite key
 - unique key
10. Where does a computer add and compare
- Hard disk
 - Floppy disk
 - CPU chip
 - Memory chip
11. A collection of four bit is called
- byte
 - nibble
 - word
 - file
12. Which of the following is an example of non-volatile memory
- ROM
 - VLSI
 - LSI
 - RAM

13. A piece of icon or image on a web page associated with another webpage is called
- a. url
 - b. hyperlink
 - c. plugin
 - d. None of the mentioned
14. HTML is used to create
- a. machine level program
 - b. High level program
 - c. Web page
 - d. Web server
15. Software that allows user to view the web page is
- a. operating system
 - b. interpreter
 - c. internet browser
 - d. website
16. A collection of wires that connects several devices is called
- a. link
 - b. bus
 - c. bidirectional wires
 - d. cables
17. Instead of buying a powerful new computer, the productivity of the old one can be economically enhanced with the help of
- a. speed up card
 - b. accelerator board
 - c. replacement board
 - d. add on board
18. The language that the computer can understand and execute is called
- a. machine language
 - b. application software
 - c. system program
 - d. all the above
19. Ethernet uses
- a. bus topology



- b. ring topology
 - c. star topology
 - d. tree topology
20. A file of structured data is
- a. data bank
 - b. database
 - c. record
 - d. data processing
21. Microsoft .NET is _____
- a. Open Source
 - b. Closed Source
 - c. Browser
 - d. All of above
22. A character variable can store how many characters at a time?
- a. 8 characters
 - b. 1 character
 - c. 255 character
 - d. 26 character
23. A program in execution is called
- a. CPU
 - b. function
 - c. process
 - d. memory
24. Modem stands for
- a. modulator demodulator
 - b. memory magnetisation
 - c. monetary demarkation
 - d. none of the above
25. What will be stored in the variable "ch" if we write the statement `char ch="z"?`
- a. ASCII value of Z
 - b. Z along with the single inverted commas
 - c. The character Z
 - d. None of above

ELECTRICAL QUESTION PAPER FOR TECHNICIAN (1) TC04 & TC05

Note:

1. No of questions is 25 and all are objective type.
2. Select the correct answer and make a tick mark (\checkmark) near the answer.
3. Time allowed is 30 minutes.
4. There is no negative marks.

Name & Roll No. of the candidate: _____

Signature of the candidate: _____

1. Resistance is measured in

- A. henries
- C. hertz

- B. ohms
- D. watts

2. Current is measured in

- A. watts
- C. henries

- B. volts
- D. amperes

3. An electric heater draws 3.5 A from a 110 V source. The resistance of the heating element is approximately

- A. 385 Ω
- B. 38.5 Ω
- C. 3.1 Ω
- D. 31 Ω

4. In a three-phase system, when the loads are perfectly balanced, the neutral current is

- A. zero
- B. one-third of maximum
- C. two-thirds of maximum
- D. at maximum

5. In a three-phase system, the voltages are separated by

- A. 45°
- B. 90°
- C. 120°
- D. 180°

6. The minimum resistance value for a blue, gray, red, silver resistor is

- A. 612 Ω +/- 5%
- B. 6,120 Ω +/- 10%
- C. 6,800 Ω +/- 10%
- D. 6,460 Ω +/- 15%

7. A multimeter measures

- A. current
- B. voltage
- C. resistance
- D. current, voltage, and resistance

8. The current in a given circuit is not to exceed 24 A. Which value of fuse is best?

- A. a fuse is not necessary
- B. 10 A
- C. 24 A
- D. 20 A

9. In 0.025 W, there are

- A. 25 kilo W
- B. 0.00025 mili W
- C. 2,500 micro W
- D. 25 mili W

10. A certain appliance uses 350 W. If it is allowed to run continuously for 24 days, how many kilowatt-hours of energy does it consume?

- A. 20.16 kWh
- B. 201.6 kWh
- C. 2.01 kWh
- D. 8.4 kWh

11. A 6 V battery is connected to a $300\ \Omega$ load. Under these conditions, it is rated at 4 Ah. How long can it supply current to the load?

- A. 1 h
- B. 200 h
- C. 2,000 h
- D. 10 h

12. Same wattage three lights are connected in parallel across a DC 120 volt source. If one light burns out,

- A. the remaining two will glow dimmer
- B. the remaining two will glow brighter
- C. the remaining two will not light
- D. the remaining two will glow with the same brightness as before

13. When the turns ratio of a transformer is 20 and the primary ac voltage is 12 V, the secondary voltage is

- A. 12 V
- B. 120 V
- C. 240 V
- D. 2,400 V

14. A transformer

- A. changes AC to DC
- B. changes DC to AC
- C. steps up or down DC voltages
- D. steps up or down AC voltages

15. When a 6 V battery is connected across the primary of a transformer with a turns ratio of 8, the secondary voltage is

- A. 0 V
- B. 6 V
- C. 48 V
- D. 0.75 V



16. Power factor is

- A. KW / KVA
- B. KVA / KW
- C. V / I
- D. VI COS ϕ

17. Maximum permissible earth resistance in 11KV SS Power transformer.

- A. 10 ohm
- B. > 10 ohm
- C. 50 Ohm
- D. < 0.5 ohm

18. BUCHHOLZ relay placed in

- A. Transformers
- B. SFU
- C. MCCB
- D. Bus bars

19. Normal colour of Silica gel in power transformer is

- A. Block
- B. White
- C. Blue
- D. Pink

20. AMF means in DG sets

- A. Auto main failure
- B. Alert main fuse
- C. Aluminium metal fabrication.
- D. Arranged motor feeders

21. 10 HP, 400V, 3 phase, 0.8 PF rated motor full load current is (1HP = 746W)

- A. 5 A
- B. 10.5 A
- C. 15.5A
- D. 13.5 A

22. HRC Fuse character is

- A. High rupturing capacity
- B. High resistance capacity
- C. High reactance capacity
- D. High rated capacity

23. Madras Atomic power plant is placed at

- A. Ennore
- B. Kalpakkam
- C. Kilpauk
- D. Kovalam

24. Solar and Wind powers are

- A. Renewable energy
- B. Non- Renewable Energy
- C. Coal Energy
- D. Nuclear Energy

25. Star / Delta starter starting time applied voltage is

- A. $V_L / 3$
- B. $V_L / \sqrt{3}$
- C. V_L
- D. $V_L \times \sqrt{3}$



ANSWERS KEY

Q.NO	Answer
1	B
2	D
3	D
4	A
5	C
6	C
7	D
8	C
9	D
10	B
11	C
12	D
13	C
14	D
15	A
16	A
17	D
18	A
19	C
20	A
21	D
22	A
23	B
24	A
25	B



Central Leather Research Institute (CLRI), Chennai**Trade Test for Technician (1) TC 07 & TC 08**

Part A: (Theory) Answer all the Questions**Duration: 30 minutes****25 x 1 = 25 marks**

1. The basic wallet is categorized as.....
 - a. Flat leather goods
 - b. Small leather goods
 - c. Solid leather goods
 - d. Fancy leather goods
2. The basic Oxford shoe is a.....
 - a. Casual Shoe
 - b. Semi-formal shoe
 - c. Formal Shoe
 - d. Traditional shoe
3. Nehru collar is commonly used in.....
 - a. Shirts
 - b. T-Shirts
 - c. Kurtas
 - d. Jackets
4.number of buttons are seen in a standard size shirt
 - a. 3 to 5
 - b. 5 to 7
 - c. 7 to 8
 - d. None of the above
5. In a sewing thread, higher the ticket number means.....the thread
 - a. Thicker
 - b. Heavier
 - c. Lighter
 - d. Finer
6. During a fashion product (garments/leather goods/footwear) development process, the spec sheet is prepared.....
 - a. Before designing
 - b. After designing
 - c. After pattern making
 - d. Before Fabrication

- | -



7. The most important property required for garment leather is.....
- Tensile strength
 - Rub fastness
 - Tear Strength
 - Drape
8. The non-grain leather which has velvety nap/sheen on the flesh side is called.....
- Nubuck
 - Velvet
 - Suede
 - Nappa
9. Pump or court shoe is ashoe
- Ladies formal
 - Gents formal
 - Ladies sports
 - Gents sports
10. Stiletto is a type of a.....
- Shoe
 - Sole
 - Heel
 - Bag
11. Mannequin is used fordress
- Fabricating
 - Displaying
 - Finishing
 - Designing
12. PETA means.....
- People for Ethical Treatment of Animals
 - Protection and Ethical Treatment of Animals
 - People for Environmental Treatment of Animals
 - Protection and Environmental Treatment of Animals
13. The most suitable raw material for making garment leather is.....
- Cow hide
 - Goat skin
 - Sheep skin
 - Pig skin
14. India is thelargest producer of footwear in the world
- 1st
 - 2nd
 - 3rd
 - 4th

15. India is thelargest producer of leather garments in the world
- 1st
 - 2nd
 - 3rd
 - 4th
16. India is thelargest producer of leather goods in the world
- 1st
 - 2nd
 - 3rd
 - 4th
17.sizing system is mostly adopted for making staple and branded garments in India
- American
 - French
 - Indian
 - English
18. CSIR means.....
- Centre for Scientific and Industrial Research
 - Council for Scientific and Industrial Research
 - Centre for Scientific and Institutional Research
 - Council for Scientific and Institutional Research
19. The Head Office of Council for Leather Exports is situated at.....
- New Delhi
 - Mumbai
 - Chennai
 - Kolkata
20. Draping is related to.....
- Footwear
 - Leather Goods
 - Garments
 - Furniture
21. Expand CAM.....
- Computer Assisted Manufacturing
 - Computer Aided Manufacturing
 - Computer Added Manufacturing
 - None of the above
22. The ideal seam for attaching components with butted joint is.....
- Open seam
 - Closed seam
 - Zig-Zag seam
 - Brooklyn seam

23. The size of the sewing needle is based on the.....of the needle

- a. Shank
- b. Shaft
- c. Blade
- d. Point

24. The larger size of the sewing needle means, larger the.....of the needle

- a. Shank
- b. Shaft
- c. Blade
- d. Point

25. In sewing operation, SPI denotes.....

- a. Seams per inch
- b. Stiches per inch
- c. Sewing per inch
- d. None of the above



Central Leather Research Institute (CLRI), Chennai

Trade Test for Technician (1) TC 07 & TC 08

Part A: (Theory) Answer Key

Duration: 30 minutes

25 x 1 = 25 marks

1. b
2. c
3. c
4. c or d
5. d
6. b
7. d
8. c
9. a
10. c
11. b
12. a
13. c

14. b
15. b
16. d
17. d
18. b
19. c
20. c
21. b
22. c
23. c
24. c
25. b

