

POST GRADUATE COMMON ENTRANCE TEST-2019

DATE and TIME	COURSE	SUBJECT
20-07-2019 2.30 p.m. to 4.30 p.m.	ME/M.Tech/M.Arch/ courses offered by VTU/UVCE/UBDTCE	TEXTILE TECHNOLOGY
MAXIMUM MARKS	TOTAL DURATION	MAXIMUM TIME FOR ANSWERING
100	150 Minutes	120 Minutes
MENTION YOUR PGCET NO.		QUESTION BOOKLET DETAILS
		VERSION CODE
		SERIAL NUMBER
		E
		125021

DOs :

- Candidate must verify that the PGCET number & Name printed on the OMR Answer Sheet is tallying with the PGCET number and Name printed on the Admission Ticket. Discrepancy if any, report to invigilator.
- This question booklet is issued to you by the invigilator after the 2nd bell i.e., after 2.25 p.m.
- The Version Code of this Question Booklet should be entered on the OMR Answer Sheet and the respective circle should also be shaded completely.
- The Version Code and Serial Number of this question booklet should be entered on the Nominal Roll without any mistakes.
- Compulsorily sign at the bottom portion of the OMR answer sheet in the space provided.

DON'Ts :

- The timing and marks printed on the OMR answer sheet should not be damaged / mutilated / spoiled.
- The 3rd Bell rings at 2.30 p.m., till then;
 - Do not remove the paper seal / polythene bag present on the right hand side of this question booklet.
 - Do not look inside this question booklet.
 - Do not start answering on the OMR answer sheet.

IMPORTANT INSTRUCTIONS TO CANDIDATES

- This question booklet contains 75 (items) questions and each question will have one statement and four answers. (Four different options / responses.)
- After the 3rd Bell is rung at 2.30 p.m., remove the paper seal / polythene bag on the right hand side of this question booklet and check that this booklet does not have any unprinted or torn or missing pages or items etc., if so, get it replaced by a complete test booklet. Read each item and start answering on the OMR answer sheet.
- During the subsequent 120 minutes:
 - Read each question (item) carefully.
 - Choose one correct answer from out of the four available responses (options / choices) given under each question / item. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose **only one response** for each item.
 - Completely darken / shade the relevant circle with a **BLUE OR BLACK INK BALL POINT PEN** against the question number on the OMR answer sheet.

ಸರಿಯಾದ ಕ್ರಮ CORRECT METHOD	ತಪ್ಪು ಕ್ರಮಗಳು WRONG METHODS
<input type="radio"/> A <input checked="" type="radio"/> B <input type="radio"/> C <input type="radio"/> D	<input checked="" type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> A <input checked="" type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> A <input checked="" type="radio"/> B <input type="radio"/> C <input type="radio"/> D
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- Use the space provided on each page of the question booklet for Rough Work. Do not use the OMR answer sheet for the same.
- After the last Bell is rung at 4.30 p.m., stop marking on the OMR answer sheet and affix your left hand thumb impression on the OMR answer sheet as per the instructions.
- Handover the OMR ANSWER SHEET to the room invigilator as it is.
- After separating the top sheet (KEA copy), the invigilator will return the bottom sheet replica (Candidate's copy) to you to carry home for self-evaluation.
- Preserve the replica of the OMR answer sheet for a minimum period of ONE year.
- Only Non-programmable calculators are allowed.

Marks Distribution

PART-1 : 50 QUESTIONS CARRY ONE MARK EACH (1 TO 50)
PART-2 : 25 QUESTIONS CARRY TWO MARKS EACH (51 TO 75)

TX-E



DATE AND TIME	COURSE	SUBJECT
14-11-2019	MEMBERSHIP	TECHNOLOGY
10:00 AM - 12:00 PM	MEMBERSHIP	TECHNOLOGY
MAXIMUM MARKS - TOTAL MARKS		
100	100	100
NEXT TEST NO.		
1		
VERSION		
1		
SERIAL NUMBER		
1		

The test is designed to assess the knowledge and skills of the candidates in the field of Technology. The test is divided into two parts: Part A and Part B. Part A contains 10 questions and Part B contains 10 questions. The total marks for the test are 100. The test is conducted on 14-11-2019 at 10:00 AM. The test is conducted at the Institute of Technology, Mumbai. The test is conducted at the Institute of Technology, Mumbai. The test is conducted at the Institute of Technology, Mumbai.

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QUESTIONS	ANSWERS
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2. The test is divided into two parts: Part A and Part B.	2. The test is divided into two parts: Part A and Part B.
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TEXTILE TECHNOLOGY

PART - 1

(Each question carries one mark)

(50 × 1 = 50)

1. Combing is process of
 - (A) Cleaning the cotton
 - (B) Removing short fibres
 - (C) Uniformity regulation
 - (D) Removing trash
2. Flyer leading mechanism is very popular in
 - (A) Cotton industry
 - (B) Jute industry
 - (C) Viscose industry
 - (D) MMF industry
3. Amount of twist inserted at speed frame should not exceed
 - (A) 1 – 15
 - (B) 10 – 20
 - (C) 20 – 30
 - (D) 30 – 40
4. The break draft in ring spinning
 - (A) Removes inherent twist
 - (B) Parallelize the Fibres
 - (C) Weakens the fibres
 - (D) Increase the strength
5. Traveller lagging in ring frame helps in
 - (A) Insertion of twist
 - (B) Uniformity
 - (C) Winding
 - (D) Helps in drafting
6. Objective of Doubling is
 - (A) To increase the elongation
 - (B) To increase strength and uniformity
 - (C) To produce fancy yarns
 - (D) Just to combine the yarns



Space For Rough Work



7. The uniformity of OE yarn is
- (A) Less than ring yarn
 - (B) Higher than ring yarn
 - (C) Equal to ring yarn
 - (D) None
8. U% of double yarn is always
- (A) Higher than single yarn
 - (B) lower than single yarn
 - (C) Equal to single yarn
 - (D) No relation
9. DREF Spinning belongs to
- (A) Twistless spinning
 - (B) Self-twist spinning
 - (C) Friction spinning
 - (D) Air-jet spinning
10. SIRO yarn can be compared to
- (A) Double yarn
 - (B) Friction yarn
 - (C) Twistless yarn
 - (D) Air-jet yarn
11. Sizing increases
- (A) Strength of yarn
 - (B) Uniformity of yarn
 - (C) Elongation
 - (D) Abrasion resistance
12. Beat up takes place at
- (A) Top centre
 - (B) Front centre
 - (C) Bottom centre
 - (D) Back centre
13. Draft in looms indicate
- (A) Timing
 - (B) Setting
 - (C) Arrangement of Healds
 - (D) Loom Speed

Space For Rough Work



14. Minimum CSP required for a yarn to be used as warp is

- (A) 10,000
- (B) 5,000
- (C) 18,000
- (D) 8,000

15. Non-woven fabrics have very high applications in

- (A) Garment industry
- (B) Filtration
- (C) Tyre cords
- (D) Household

16. Wales are normally

- (A) Vertical loops
- (B) Horizontal loops
- (C) Horizontal & vertical Loops
- (D) None

17. Positive feeding helps in

- (A) Better uniformity
- (B) Good strength
- (C) Better loop shape factor
- (D) None of these

18. Tricot belongs to

- (A) Flat weft knitting
- (B) Circular weft knitting
- (C) Warp knitting
- (D) Braiding

19. Objective of Desizing is to remove

- (A) Size applied on cotton
- (B) Starch
- (C) Natural Colouring matter
- (D) Fatty acids

Space For Rough Work



20. Percentage of gum removed in degumming ranges between
- (A) 10-15
 - (B) 5-10
 - (C) 20-25
 - (D) 15-18
21. Reeling requires warm water temperature of
- (A) 25 °C
 - (B) 10 °C
 - (C) 65 °C
 - (D) 20 °C
22. Topping with basic dyes and after treatment given to
- (A) Direct dyed goods
 - (B) Basic dyed goods
 - (C) Fabrics dyed with Acid dyes
 - (D) Vat dyed goods
23. Thermosol Dyeing is done for
- (A) Cotton
 - (B) Jute
 - (C) PET
 - (D) Silk
24. Fineness of cotton is normally expressed as
- (A) Micronaire value
 - (B) Maturity Coefficient
 - (C) K/S Value
 - (D) Hand Value
25. Differential dyeing is used to measure
- (A) Maturity
 - (B) Strength
 - (C) Elongation
 - (D) Fineness

Space For Rough Work



26. Despite weak dye-fiber interaction, vat dyes are extremely good wash fastness on cotton because of
- (A) Low molecular wt. of the dye
 - (B) High solubility in water
 - (C) Water insolubility of dye and dye aggregation
 - (D) Dyeing temperature
27. Among the following fiber properties which one correlates the best with the handle of the fabric :
- (A) Initial modulus
 - (B) Yield stress
 - (C) Tenacity at break
 - (D) Elongation at break
28. With the increase in pick density the tensile strength of fabric in warp direction
- (A) Increases
 - (B) Decreases
 - (C) First increases & then decreases
 - (D) First decreases & then increases
29. The tear strength of a 3/1 twill fabric having the same yarns in warp & weft and the same sett as a plain woven fabric will be
- (A) Higher
 - (B) Lower
 - (C) Same
 - (D) Some times higher & sometimes lower
30. The units of bending rigidity of a fabric are
- (A) mN/mm
 - (B) mN/mm^2
 - (C) $\text{mN}\cdot\text{mm}$
 - (D) $\text{mN}\cdot\text{mm}^2$
31. If the actual draft in a card is 90 and the mechanical draft 85, the waste % extracted by the card will be
- (A) 5.0% (B) 5.5%
 - (C) 6.0% (D) 7.0%



Space For Rough Work



32. The index of irregularity is the highest in the

- (A) Sliver
- (B) Roving
- (C) Single yarn
- (D) Plied yarn

33. Slay velocity in m/s at the front center of the loom is

- (A) 0
- (B) 10
- (C) 30
- (D) 50

34. A design repeating on 45 cm along the length and 30 cm along the width of the fabric having 40 ends and 35 picks per cm will require a jacquard capacity of

- (A) 1050
- (B) 1200
- (C) 1400
- (D) 1600

35. Treatment of polyester with 3-5% caustic soda at boil is carried out to impart

- (A) Water repellency
- (B) Crease resistance
- (C) Antistatic property
- (D) Stiffness

36. The concentration (%) of mercerizing caustic soda is in the range

- (A) 5-10
- (B) 11-15
- (C) 16-20
- (D) 21-25

37. The cationic dyes are commonly applied on

- (A) Cotton
- (B) Nylon
- (C) Polyester
- (D) Acrylic



Space For Rough Work



38. Calendering is carried out to
- (A) Impart the feel
 - (B) Impart luster
 - (C) Impart body of fabric
 - (D) Impart dimensional stability

39. Dyeing of cellulose with direct dyes is
- (A) An exothermic process
 - (B) An endothermic process
 - (C) An athermic process
 - (D) Not a thermodynamic event

40. In Sulzer projectile loom the picking force depends on
- (A) Loom speed
 - (B) Projectile mass
 - (C) Torsion bar adjustment
 - (D) None of these

41. Which of the following fibre is used to make parachute fabric ?

- (A) Cotton
- (B) Kevlar
- (C) Glass
- (D) Nylon

42. Dimethylol dihydroxy ethylene urea is used to improve

- (A) Crease resistance of cotton
- (B) Flame retardance of nylon
- (C) Softness of polyester
- (D) Soil release

43. The maximum height of ply on the fabric cutting table is

- (A) 28 cm
- (B) 30 inch
- (C) 1 mtr
- (D) 10 cm

Space For Rough Work



44. A loom running at 200 rpm with 80% efficiency and inserting 80 picks per cm would produce in one hour a length of fabric equal to
(A) 1.00 m (B) 1.15 m
(C) 1.20 m (D) 1.5 m
45. Polypropylene fibers are generally
(A) Dyed with acid dyes
(B) Dyed with disperse dyes
(C) Dyed with pigment colors
(D) Dope dyed
46. In computer colour matching, following value is considered as important :
(A) K/V (B) K/S
(C) S/M (D) K/D
47. Role of AEPC is to
(A) Increase apparel production
(B) Negotiate with foreign buyers
(C) Increase the number of export markets and stabilization of exports
(D) Increase domestic apparel production
48. The term Sabbatical is connected with
(A) Paid leave with study
(B) Paternity leave
(C) Maternity leave
(D) Quarantine leave
49. In garment export process TLC (Total Landed Cost) includes
(A) FOB + Insurance
(B) Quota premium
(C) Custom duty
(D) FOB + Quota Premium + Custom duty + freight and insurance
50. Welfare officers are to be appointed if organization is employing following no. of employees :
(A) 250
(B) 500
(C) 600
(D) 750

Space For Rough Work



PART – 2

(Each question carries two marks)

(25 × 2 = 50)

51. Number average molecular weight of spinnable textile grade polyester is approximately
- (A) 12,000
 - (B) 30,000
 - (C) 18,000
 - (D) 40,000
52. Average cotton fiber strength in cN/tex is
- (A) 20 – 30
 - (B) 10 – 20
 - (C) 30 – 40
 - (D) 40 – 50
53. Yarn hairiness index obtained using hairiness sensor on Uster evenness tester refers to the total length of protruding hairs (in cm) for a yarn length of
- (A) 1 mm
 - (B) 10 mm
 - (C) 100 mm
 - (D) 1000 mm
54. In a carding machine the setting is minimum between
- (A) Cylinder to licker in
 - (B) Feed plate to licker in
 - (C) Front plate to cylinder
 - (D) Cylinder to doffer
55. Cellulase is used for
- (A) Desizing
 - (B) Reducing surface tension of the wash liquor
 - (C) Bio polishing of the cotton fabrics
 - (D) Removing protienous impurities during scouring

Space For Rough Work



56. A well-known flame retardant is

- (A) DMDHEU
- (B) Rongalite-C
- (C) THPC
- (D) Poly-dimethyl siloxane

57. In a Cotton comber, noil extraction increases

- (A) with decrease in detachment setting
- (B) with increase in pre-combing draft.
- (C) with an increase in short fibres.
- (D) if majority of hooks are presented in leading direction.

58. Match the following :

Choose the correct one among the alternatives (A), (B), (C) and (D) :

Group 1

Group 2

- | | |
|--------------|--------------------------------|
| P. Nylon 6,6 | 1. Trans-esterification |
| Q. Acrylic | 2. Adipic acid |
| R. Polyester | 3. Condensation polymerization |
| S. Nylon 6 | 4. PTA |
| | 5. Solution spinning |
| | 6. Caprolactum |

- (A) P-1, Q-3, R-2, S-6
- (B) P-2, Q-4, R-3, S-1
- (C) P-1, Q-2, R-3, S-5
- (D) P-2, Q-5, R-3, S-6

Space For Rough Work



59. Following is an example of extracorporeal device :
- (A) Nerve conduit
 - (B) Ligament
 - (C) Heart Valve
 - (D) Artificial Kidney
60. Oeko textiles are concerned with :
- (A) Health protection
 - (B) Environmental protection
 - (C) Animal protection
 - (D) Ballistic protection
61. Amongst the following fibers the highest initial modulus is demonstrated by
- (A) Cotton
 - (B) Wool
 - (C) POY polyester
 - (D) Jute
62. Which of the following fibers swells in acetone but does not dissolve in it ?
- (A) Polyester
 - (B) Cotton
 - (C) Acetate
 - (D) Triacetate
63. The fully drawn textile grade PP filament yarn is crystalline to the extent of about
- (A) 20%
 - (B) 35%
 - (C) 50%
 - (D) 75%
64. The characteristic of fiber which cannot be measured by X-ray diffraction technique is
- (A) Amorphous content
 - (B) Crystallinity
 - (C) Diachronic ratio
 - (D) Size of the crystallite

Space For Rough Work



65. In textile testing for a certain property sample size is proportional to
- (A) Square of CV
 - (B) CV
 - (C) Square root of CV
 - (D) Cube of CV
66. The sum of crease angles in warp and weft direction of 67:33 polyester/viscose suiting cloth would be around
- (A) 437
 - (B) 400
 - (C) 250
 - (D) 100
67. The F test is used for
- (A) Significance testing of dispersion
 - (B) Significance testing of two means
 - (C) Testing whether the frequency distribution is normal.
 - (D) Testing whether the frequency distribution is Poisson.
68. Drawing and doubling operations on draw frame are mainly used to
- (A) Improve short & medium term variations in sliver
 - (B) Improve sliver strength
 - (C) Improve long term variations in sliver
 - (D) Make the sliver finer
69. The purpose of using auto levellers is to improve
- (A) Fiber orientation in yarn
 - (B) Yarn count CV
 - (C) Yarn strength
 - (D) Yarn faults
70. In which would the twist density be the highest in the ring spinning
- (A) Spinning zone yarn
 - (B) Balloon zone yarn
 - (C) Winding zone yarn
 - (D) Bobbin yarn

Space For Rough Work



71. Length of 20 tex polyester/cotton yarn on a 2 kg cone will be
- (A) 50
 - (B) 100
 - (C) 150
 - (D) 200
72. During the production of a cone on surface driven winder, the point of drive is
- (A) At the centre of the package
 - (B) At the package base
 - (C) Near the package nose
 - (D) Near the package base
73. On the shuttle loom the slay acceleration during the shuttle flight on the race board is
- (A) Towards the front of the loom
 - (B) Towards the back of the loom
 - (C) First towards the front and then towards the back
 - (D) First towards the back and then towards the front
74. During the degumming of silk, sericin is preferentially hydrolyzed compared to fibroin because sericin is
- (A) Amorphous and hydrophilic
 - (B) Crystalline & unoriented
 - (C) Hydrophobic
 - (D) Highly oriented
75. Which of the following equipment is suitable for continuous bleaching of cotton ?
- (A) J-box
 - (B) Kier
 - (C) Pad-roll machine
 - (D) Jumbo jigger

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