POST GRADUATE COMMON ENTRANCE TEST-2016

DATE and TIME	COURSE	SUBJECT
03-07-2016 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
	A - 1	209517

DOs :

1. Check whether the PGCET No. has been entered and shaded in the respective circles on the OMR answer sheet.
2. Ensure whether the circles corresponding to course and the specific branch have been shaded on the OMR answer sheet.
3. This Question Booklet is issued to you by the invigilator after the **2nd Bell i.e., after 2.25 p.m.**
4. The Serial Number of this question booklet should be entered and the respective circles should also be shaded completely on the OMR answer sheet.
5. The Version Code of this question booklet should be entered on the OMR answer sheet and the respective circles should also be shaded completely on the OMR answer sheet.
6. Compulsorily sign at the bottom portion of the OMR answer sheet in the space provided.

DON'Ts :

1. **THE TIMING AND MARKS PRINTED ON THE OMR ANSWER SHEET SHOULD NOT BE DAMAGED / MUTILATED / SPOILED.**
2. The **3rd Bell rings at 2.30 p.m., till then;**
   - Do not remove the paper seal / polythene bag of this question booklet.
   - Do not look inside this question booklet.
   - Do not start answering on the OMR answer sheet.

IMPORTANT INSTRUCTIONS TO CANDIDATES

1. This question booklet contains 75 (items) questions and each question will have one statement and four answers. (Four different options / responses.)
2. After the **3rd Bell is rung at 2.30 p.m.,** remove the paper seal / polythene bag 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.
3. 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.**

Correct Method of shading the circle on the OMR answer sheet is as shown below :

(A) ● (C) (D)

4. Use the space provided on each page of the question booklet for Rough Work. Do not use the OMR answer sheet for the same.
5. 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.
6. Handover the **OMR ANSWER SHEET** to the room invigilator as it is.
7. 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.
8. Preserve the replica of the OMR answer sheet for a minimum period of **ONE year.**
9. 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)

TEXTILE TECHNOLOGY
PART – 1
(Each question carries one mark) **(50 × 1 = 50)**

1. _____ fibres are used to make elastic fabrics
   (A) Polyester
   (B) Nylon
   (C) Acetate
   (D) Lycra

2. Acrylic fibres have _____ structure.
   (A) Dog bone
   (B) Circular
   (C) Triangular
   (D) Semi-circular

3. Solution polymerization is generally used to produce
   (A) Polyester
   (B) Nomex
   (C) Kelvar
   (D) Acrylic fibres

4. The temperature at which carbon fibres are produced
   (A) 250 – 300 °C
   (B) 2000 – 2500 °C
   (C) 100 – 150 °C
   (D) 800 – 900 °C

5. Amongst the following _____ fibre has the lowest moisture regain.
   (A) Polyester
   (B) Nylon
   (C) Polypropylene
   (D) Acrylic

6. Birefringence and sonic modulus generally explain
   (A) Crystallinity of fibres
   (B) Orientation of fibres
   (C) Crystalline & amorphons orientation
   (D) Crystallite size

Space For Rough Work

7. Functional groups in a fibre can be identified by

(A) X – ray spectroscopy

(B) FTIR – spectroscopy

(C) HPLC

(D) Mass spectroscopy

8. Weight in gms of 1000 mts of filaments is known as

(A) English count

(B) Denier

(C) Tex

(D) Kilo Tex

9. The two raw materials used for production of Nylon fibres are

(A) Hexamethylene diamine & adipic acid

(B) Adipic acid and caprolactum

(C) Caprolactum and acrylamide

(D) Polyacrylamide and Benzoic acid

10. Three bladed beater is considered as _____.

(A) Trash analyser

(B) Minor cleaning point

(C) Major cleaning point

(D) Nep cleaning point

11. Attenuation of fibres takes place in

(A) Carding

(B) Draw frame

(C) Simplex

(D) Doubling

12. Ring spun yarns are better than OE yarns because

(A) They are stronger

(B) They are more uniform

(C) They are clean and neat

(D) They are smooth

Space For Rough Work

13. Piano feed regulating motion is used in _____

(A) Simplex

(B) Carding engine

(C) Draw frame

(D) Scutcher

14. The proportion of trailing hooks in card sliver is

(A) 20%

(B) 60%

(C) 55%

(D) 10%

15. Auto levellers are used in

(A) Blow room

(B) Ring frame

(C) Carding & draw frame

(D) Winding

16. Water jet looms are not suitable to weave

(A) Polyester fabrics

(B) Acrylic fabrics

(C) Nylon fabrics

(D) Cotton fabrics

17. The setting for mechanical slub catcher in winding is

(A) 1.5 times the yarn dia

(B) Equals the yarn dia

(C) 2.5 times the yarn dia

(D) 3 times the yarn dia

18. Generally thin places in a yarn are removed in winding by

(A) Tensioners

(B) Weft cleaners

(C) Yarn clearers

(D) Feelers

Space For Rough Work

19. Following is the universal bleaching agent.

(A) Sodium peroxide

(B) Hydrogen peroxide

(C) Sodium perborate

(D) Peracitic acid

20. Chemical formula of bleaching powder is

(A) Double chloride of calcium hypochlorite

(B) Sodium hypochlorite

(C) Sodium peroxide

(D) Calcium perhydroxide

21. The following is a sequestering agent.

(A) EDFA

(B) EDTA

(C) EDMA

(D) EMDA

22. Hot mercerization means

(A) Mercerization at 200 °C

(B) Mercerization at 65 – 90 °C

(C) Mercerization at 100 °C

(D) Mercerization at 120 °C

23. Lenco vat is a _____.

(A) Oxidised form of vat dye

(B) Reduced form of vat dye

(C) Chlorinated vat dye

(D) Insoluble form of vat dye

24. Vinyl sulphone reactive dyes have the following name.

(A) Bifunctional dyes

(B) Remazol dyes

(C) Monochlorotriazine dyes

(D) Hetero bifunctional dyes

Space For Rough Work

25. Main advantage of pigment printing is

(A) Less quantity of chemicals

(B) Quick delivery of printed goods

(C) No washing is required

(D) Reduced cost of ingredients

26. 'Batik' style of printing is a

(A) Discharge style of printing

(B) Special style of printing

(C) Reduced style of printing

(D) Resist style of printing

27. In pigment printing urea acts as a

(A) Oxidizing agent

(B) Reducing agent

(C) Deliquescent

(D) Surfactant

28. Following is the example for non-formaldehyde based anti-creasing agent.

(A) DMEU

(B) DMDHEU

(C) BTCA

(D) TMEU

29. Diazotisation of base in azoic dyeing takes place between

(A) Base, HC*l* & $NaNO_2$

(B) Base, Ice & NaOH

(C) Base, NaOH & NaC*l*

(D) Base, Naphthol & NaOH

30. Metal complex dyes are derivatives of

(A) Basic dyes

(B) Acid dyes

(C) Direct dyes

(D) Reactive dyes

Space For Rough Work

31. Fabric handle can be measured by

(A) Kawabata evaluation system

(B) Serigraph testing

(C) Drape and abrasion testing

(D) Flexural rigidity

32. Higher the drape coefficient means

(A) Higher the drapability

(B) Lower the drapability

(C) No change in drapability

(D) Variation in drapability

33. Loop test is generally used for measuring

(A) Drape of fabric

(B) Flexural rigidity of filament/yarns

(C) Bending of fabric

(D) Twist of yarns

34. Stelometer is used for measuring

(A) Twist in yarns

(B) Bundle strength of fibres

(C) Count of yarns

(D) Abrasion resistance of fabrics

35. Stifling of cocoons is done to _____.

(A) Facilitate long storage of cocoons

(B) Improve the quality of silk

(C) Improve the quality of reeling

(D) Increase of price of cocoons

36. 'Tarapath' is a thread guide used in

(A) Cottage basin

(B) Multi – end reeling machines

(C) Semi – automatic machines

(D) Charaka

Space For Rough Work

37. The twist levels in a crepe yarns is

(A) 10 – 20 turns/mt

(B) 2000 – 2200 turns/mt

(C) 100 – 150 turns/mt

(D) 50 – 70 turns/mt

38. Following picking mechanism is generally used on silk looms :

(A) Torsion bar picking

(B) Multi level picking

(C) Cone under tricking

(D) Traction picking

39. Jettebout on a multi – end basin is a

(A) Filament cutting device

(B) Cocoon picking device

(C) Filament end picking device

(D) Tensioning device

40. Pure zari consists of

(A) Silk + Silver + Copper

(B) Gold + Twisted silk + Silver

(C) Silver + Cuprammonium rayon + Gold

(D) Gold + Copper + Polyester

41. Degumming of raw silk is done to improve

(A) Drapability of silk yarns

(B) Lustre of silk yarns

(C) Neatness of silk yarns

(D) Cleaners of silk yarns

42. 'Dressing frame' is used in

(A) Reeling industry

(B) Weaving industry

(C) Spun silk industry

(D) Dyeing industry

Space For Rough Work

43. Cohesion test is used for testing of

(A) Polyester yarns

(B) Nylon filaments

(C) Woollen yarns

(D) Raw silk yarns

44. 4 – point and 10 – point systems are used for

(A) Yarn inspection

(B) Fabric inspection

(C) Garment inspection

(D) Raw material inspection

45. 'ARROW' is brand name of _____ company.

(A) Arvind mills

(B) Raymonds

(C) Gokaldas images

(D) Van Hansen

46. Main duties of an apparel merchandiser are

(A) Coordinating purchase orders

(B) Packing and forwarding

(C) Souring the fabrics

(D) Cutting and sewing

47. Following structure is used for toweling fabric.

(A) Twill

(B) Velvet

(C) Huck a back

(D) Damask

48. Damask and brocade fabrics are generally woven on

(A) Plain looms

(B) Automatic looms

(C) Jacquard looms

(D) Dobby looms

49. _____ weave is used to produce terry towel fabric.

(A) Mark leno

(B) Damask

(C) Pile

(D) Herring bone twill

50. _____ is a popular garment design software.

(A) GERBER

(B) LENOTEX

(C) INDWEAVE

(D) SOFT APPAREL

Space For Rough Work

PART – 2

(Each question carries two marks) **(25 × 2 = 50)**

51. Density of silk is

(A) Lower than cotton but higher than Nylon

(B) Equal to acrylic

(C) Higher than cotton but lower than polyester

(D) Equal to wool

52. Mazor reducing agents used in dyeing are

(A) Sod. Hydrosulphite + Sod. sulphide + Rongalite – C

(B) Sod. metaphosphate + Rongalite – C + Sod. hydroxide

(C) Calcium hypophosphites

(D) Zinc chloride and magnesium chloride

53. The process of drawing of as spun filaments to impart orientation is typically

carried out at temperatures

(A) Below Tg

(B) Near softening point

(C) Near melting point (Tm)

(D) Just above glass transition temperature (Tg)

54. If the percent moisture regain (R) of a fibre is 8, its percent moisture content (M) would be

(A) 7.4

(B) 7.2

(C) 7.6

(D) 7.0

Space For Rough Work

55. Minimum of _____ functional groups are required for conducting condensation polymerization.

(A) 1

(B) 2

(C) 3

(D) 4

56. Moisture regain of Nylon fibre is in the range of

(A) 2.0 – 3.0

(B) 3.5 – 4.5

(C) 7.0 – 8.0

(D) 10 – 11

57. The air pressure required on air jet loom at the time of weft insertion is

(A) 10 bar

(B) 6 bar

(C) 20 bar

(D) 30 bar

58. AQL system inspection is related to

(A) Fabric inspection

(B) Garment inspection

(C) Sewing thread inspection

(D) Support materials inspection

59. For a known growth, the micronaire value of cotton fibre is the measure of

(A) Fibre length

(B) Fibre Strength

(C) Fibre maturity

(D) Fibre fineness

60. The stretch allowed for cotton warp on multi-cylinder sizing machine is

(A) 5%

(B) 2%

(C) 6%

(D) 10%

Space For Rough Work

61. If the length of card sliver is 6 yds and weight is 357 grains, the hank of sliver will be

(A) 0.14 Ne

(B) 0.12 Ne

(C) 0.16 Ne

(D) 0.18 Ne

62. The length of yarn at front roller of ring frame is 1800 yds, & twist contraction is 5% then the length on bobbin will be equal to

(A) 1780 yds

(B) 1710 yds

(C) 1890 yds

(D) 1800 yds

63. Heat transfer printing makes use of _____.

(A) Solubility of dyes

(B) Migration characteristics of dyes

(C) Sublimation property of dyes

(D) Diffusion of dyes

64. Colloidal theory of dyeing is used to explain

(A) Dyeing of cotton

(B) Dyeing of polyester

(C) Dyeing of silk and wool

(D) Dyeing of acrylics

65. Carrier dyeing of polyester is carried out at

(A) 120 – 130 °C

(B) 80 – 90 °C

(C) 100 °C

(D) 150 – 170 °C

Space For Rough Work

66. Projected area of a 30 cm dia fabric specimen placed on 20 cm dia support plate of drape tester is 302 cm^2. Drape coefficient for this fabric is _____

(A) 0.47

(B) 0.57

(C) 0.67

(D) 0.77

67. In a twist – untwist method to determine yarn twist using 10" sample, 400 rotations of a jaw are required to complete the test. Twist per inch in the yarn is

(A) 80

(B) 40

(C) 20

(D) 10

68. The draw frame draft of a draw frame with a front roller speed of 800 mts/min and back roller speed is 110 yds/min is

(A) 7

(B) 8

(C) 9

(D) 10

69. If 'D' is the fibre dia, air flow rate through a plug of fibres is proportional to

(A) D^2

(B) D

(C) 1/D

(D) $1/D^2$

70. Commercial grade polypropylene is

(A) Atactic

(B) Isotactic

(C) Syndiotactic

(D) Smectic

Space For Rough Work

71. Following instrument measures the K/S value of a dyed fabric

(A) Potentiometer

(B) Reflectance spectrophotometer

(C) Atomic mass spectrophotometer

(D) Infrared spectrophotometer

72. Following chemical is used as an anticreasing agent.

(A) NaOH

(B) Na_2SiO_3

(C) DMDHEU

(D) CH_3COOH

73. The weight in gms of 9 km of yarn is known as

(A) Kilo Tex

(B) Denier

(C) Tex

(D) Milli Tex

74. Winch dyeing machine is used to dye

(A) Tightly woven fabrics

(B) Knitted fabrics

(C) Light weight PET fabrics

(D) Non – woven Nylon fabrics

75. Following calendaring machine produces fine lines on fabric.

(A) Swizzing calendar

(B) Schreiner calendar

(C) Friction calendar

(D) Lapping calendar

Space For Rough Work

Space For Rough Work