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PD - 30

Total No. of Pages : 12

Ph.d Entrance Examination March/April, 2026

TEXTILE ENGINEERING

Subject Code : 58751

Day and Date : Wednesday, 07-Oct-2026

Total Marks : 100

Time : 04.00 p.m. to 06.00 p.m.

Instructions :

- 1) All questions are compulsory.
- 2) Each question carries 2 marks.
- 3) Answers should be marked in the given OMR answer sheet by darkening the appropriate option.
- 4) Use black ball point pen only for marking the circle. Do not make any stray mark on the OMR answer sheet.
- 5) Follow the instructions given on OMR Sheet.
- 6) Rough work shall be done on the sheet provided at the end of question paper.
- 7) Only non-programmable calculators are allowed.

Q.1 The fineness of a textile fibre is commonly expressed in terms of

- a. Linear density
- b. Fibre length
- c. Fibre strength
- d. Moisture regain

Q.2 The primary purpose of carding in spinning is to

- a. Increase yarn twist
- b. Dye the fibres
- c. Increase fabric density
- d. Open, clean and individualize fibres

Q.3 The main function of a draw frame is to

- a. Wind yarn
- b. Form fabric
- c. Twist fibres
- d. Improve sliver uniformity by doubling and drafting

Q.4 In ring spinning, yarn twist is inserted mainly by the

- a. Traveller-ring system
- b. Back roller
- c. Bobbin rail
- d. Drafting rollers

Q.5 The strength of a yarn is generally measured using a

- a. Spectrophotometer
- b. GSM cutter
- c. Tensile testing machine
- d. Crock meter

Q.6 Yarn count expressed as mass per unit length is known as

- a. Metric count
- b. Direct count
- c. Indirect count
- d. English count

Q.7 The term GSM in textiles refers to

- a. Grams per spindle metre
- b. Gauge per square metre
- c. Grams per standard metre
- d. Grams per square metre

Q.8 The main purpose of sizing warp yarns is to

- a. Remove all twist
- b. Reduce yarn strength
- c. Improve abrasion resistance and weaving performance
- d. Increase yarn hairiness

Q.9 A plain weave is characterized by

- a. One up and one down interlacement
- b. No interlacement
- c. Two warp and two weft floats only
- d. Long warp floats

Q.10 In weaving, the process of separating warp yarns to form a shed is called

- a. Picking
- b. Let-off
- c. Shedding
- d. Beat-up

Q.11 The function of the reed in a loom includes

- a. Forming the shed
- b. Producing twist
- c. Supplying warp yarn
- d. Beating the weft into the fell

Q.12 In knitting, the basic structural element of the fabric is the

- a. Loop
- b. Dent
- c. Shed
- d. Pick

Q.13 The process of converting grey fabric into a fabric with desired appearance and properties is called

- a. Finishing
- b. Drawing
- c. Carding
- d. Ginning

Q.14. Scouring of cotton fabric is mainly carried out to remove

- a. Yarn twist
- b. Cellulose
- c. Natural and added impurities
- d. Fibre length

Q.15 Mercerization of cotton generally improves

- a. Lustre and dye affinity
- b. Fibre length
- c. Yarn hairiness
- d. Fibre contamination

Q.16 Colour fastness indicates the resistance of a dyed textile to

- a. Colour change or transfer
- b. Yarn twist
- c. Fabric thickness
- d. Fibre breakage only

Q.17 A geotextile is primarily used in

- a. Household cooking
- b. Civil engineering and geotechnical applications
- c. Medical diagnosis only
- d. Food preparation

Q.18 Nonwoven fabrics are manufactured without conventional

- a. Fibre bonding
- b. Fibre blending
- c. Yarn interlacement
- d. Fibre formation

Q.19 A composite material generally consists of

- a. Fibre and dye only
- b. Yarn and sizing only
- c. Matrix and reinforcement
- d. Fabric and pigment only

Q.20 Kevlar is classified as a

- a. Regenerated cellulose fibre
- b. Thermoplastic elastomer
- c. High-performance aramid fibre
- d. Natural protein fibre

Q 21. Moisture regain of a textile fibre is related to its ability to

- a. Increase yarn twist
- b. Reduce fibre length
- c. Absorb moisture from the atmosphere
- d. Resist all chemicals

Q.22 AFIS is used in textile testing mainly for analysis of

- a. Yarn twist only
- b. Fibre properties
- c. Seam strength only
- d. Fabric colour only

Q.23 The primary function of a shuttle or weft insertion system is to

- a. Insert twist into yarn
- b. Measure fabric GSM
- c. Insert weft yarn across the shed
- d. Draft warp yarn

Q.24 The strength of a woven fabric in the warp and weft directions can be determined using a

- a. Twist tester
- b. Micronaire tester
- c. Fabric tensile tester
- d. Wrap reel

Q.25 The main objective of fabric inspection is to

- a. Increase fibre fineness
- b. Detect and classify fabric defects
- c. Insert yarn twist
- d. Remove all sizing

Q.26 Research is primarily a systematic process of

- a. Guessing results
- b. Investigating a problem to generate knowledge
- c. Repeating existing statements
- d. Collecting opinions only

Q.27 A research problem should ideally be

- a. Clearly defined and researchable
- b. Vague
- c. Based only on assumptions
- d. Unrelated to objectives

Q.28 A hypothesis is a

- a. List of references
- b. Final research conclusion
- c. Tentative statement that can be tested
- d. Sampling frame

Q.29 The variable manipulated by a researcher is called the

- a. Control variable
- b. Independent variable
- c. Extraneous result
- d. Dependent variable

Q.30 The variable measured as an outcome is called the

- a. Independent variable
- b. Constant
- c. Sampling variable
- d. Dependent variable

Q.31 A literature review helps a researcher to

- a. Replace experimentation
- b. Avoid reading previous work
- c. Eliminate data analysis
- d. Identify existing knowledge and research gaps

Q.32 The method by which a sample is chosen is called

- a. Unit design
- b. Observation design
- c. Sampling design
- d. Operational design

Q.33 In simple random sampling, each population unit has

- a. A known and generally equal chance of selection
- b. No chance of selection
- c. A fixed position in the sample
- d. Selection based only on convenience

Q.34 A population in research refers to

- a. The research instrument
- b. The hypothesis
- c. Only the selected sample
- d. The complete set of units of interest

Q.35 A questionnaire is primarily a tool for

- a. Performing regression automatically
- b. Collecting structured information from respondents
- c. Testing tensile strength
- d. Measuring fibre fineness

Q.36 Reliability of a research instrument refers to its

- a. Number of pages
- b. Cost of preparation
- c. Length
- d. Consistency of measurement

Q.37 Validity refers to the extent to which an instrument

- a. Produces random results
- b. Measures what it is intended to measure
- c. Is inexpensive
- d. Contains many questions

Q.38 A pilot study is generally conducted to

- a. Publish final results
- b. Replace the main study
- c. Avoid data collection
- d. Test and refine the research procedure or instrument

Q.39 Descriptive statistics are used mainly to

- a. Prove every hypothesis
- b. Select research topics
- c. Write references
- d. Summarize and describe data

Q.40 The arithmetic mean is calculated by

- a. Median multiplied by mode
- b. Sum of observations divided by number of observations
- c. Range divided by variance
- d. Largest value divided by smallest value

Q.41 The median is the

- a. Largest observation
- b. Middle value when observations are arranged in order
- c. Most frequent value
- d. Difference between largest and smallest values

Q.42 Standard deviation is a measure of

- a. Sampling frame
- b. Central tendency only
- c. Research validity
- d. Dispersion of observations

Q.43 ANOVA is commonly used to test differences among

- a. Literature references
- b. Means of more than two groups
- c. Research titles
- d. Only two individual observations

Q.44 The null hypothesis generally states that

- a. The variables are identical
- b. There is no significant effect or difference
- c. The sample is always biased
- d. The research result must be significant

Q.45 A p-value is commonly used in hypothesis testing to assess

- a. Evidence against the null hypothesis
- b. Literature quality
- c. Sample size only
- d. Questionnaire length

Q.46 Correlation measures the

- a. Number of respondents
- b. Validity of a questionnaire
- c. Cost of research
- d. Degree of association between variables

Q.47 Regression analysis is commonly used for

- a. Modelling relationships and prediction
- b. Preparing a bibliography only
- c. Measuring fabric GSM
- d. Sampling without a population

Q.48 Plagiarism means

- a. Using another person's work or ideas without appropriate acknowledgement
- b. Conducting a pilot study
- c. Publishing original findings
- d. Collecting primary data

Q.49 A research paper should cite sources mainly to

- a. Acknowledge previous work and support statements
- b. Replace original analysis
- c. Increase page count
- d. Avoid presenting results

Q 50. The conclusion of a research study should be based primarily on

- a. The title alone
- b. Findings and analysis of the study
- c. Unrelated literature
- d. Personal preference



- Rough Work -

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