

5. Match the LOI % of the following fibers:

[K₁]

List I	List II
A. Nomex	i. 55
B. PBI	ii. 34
C. PPS	iii. 29
D. PAN -OX	iv. 41

- a) A-ii, B-iii, C-iv, D-i b) A - iii, B - iv, C- ii, D- i
 c) A- iv, B- i, C- ii, D- iii d) A - i, B - ii C- iii, D- iv

6. Match the suitable fiber for the following automotive applications:

[K₂]

List I	List II
A. Transmission oil filter	i. Glass
B. Headlining substrate	ii. Polypropylene
C. Shelf panel cover	iii. Nylon
D. Seat cover slit sheet	iv. Polyester

- a) A-ii, B-iii, C-iv, D-i b) A - iii, B - iv, C- ii, D- i
 c) A- iv, B- i, C- ii, D- iii d) A - i, B - ii C- iii, D- iv

7. Assertion (A) : Radial tire performs better than bias tire.

[K₃]

Reason (R) : The design provides a very flexible side wall which contributes to long life , better ride at high speed, better cornering, improved wear resistance and road holding ability

- a) Both (A) and (R) are true and (R) is the correct explanation of (A) b) (A) is true but (R) is false
 c) Both (A) and (R) are true but (R) is not the correct explanation of (A) d) (A) is false but (R) is true

8. Assertion (A) : In general a plain balanced woven fabric is preferred for ballistic protection.

[K₃]

Reason (R) : The woven fibers work together to dissipate the impact energy, a relatively large area of the fabrics become involved in preventing the bullets penetration

- a) Both (A) and (R) are true and (R) is the correct explanation of (A) b) (A) is true but (R) is false
 c) Both (A) and (R) are true but (R) is not the correct explanation of (A) d) (A) is false but (R) is true

PART D (4 x 10 = 40 Marks)

27. Explain the structure and properties of any one thermally resistant fiber. [K₂]
28. Explain the major requirements for military textiles for soldier protection and list the military textile and apparel items. [K₂]
29. Compare the spun bonded and melt blown nonwoven filter. [K₄]
30. Describe the functional requirements, raw material selection and construction of air bags. [K₂]
