

**M.Sc. 2nd Semester Examination, 2010**  
**BIO-MEDICAL LABORATORY SCIENCE**  
**AND MANAGEMENT**

*(General Repro. Events & Assisted Repro. Tech.)*

PAPER—V(U-9)

*Full Marks : 40*

*Time : 2 hours*

*The figures in the right-hand margin indicate marks*  
*Candidates are required to give their answers in their*  
*own words as far as practicable*

*Illustrate the answers wherever necessary*

**MODULE—1**

1. Answer any *five* of the following : 1 × 5
- (a) What is meant by superovulation ?
- (b) Name the different phases of spermiogenesis.
- (c) What do you mean by oligospermia?

- (d) Mention the source of fructose in semen.
- (e) What do you mean by delayed ovulation ?
- (f) What is meant by immunological contraceptive ?
- (g) Write the reference value of hypoosmotic swelling sperm.
- (h) Write the application of sperm cryopreservation.

2. (a) What do you mean by implantation ?
- (b) Why does blastocyst implants within endometrium but not up to the myometrium ?
- (c) Write the role of hcG on pregnancy maintenance.

2 + 4 + 2

Or

- (a) Write the principle of fructose quantification in seminal plasma.
- (b) State the procedure for the quantification of fructose in seminal plasma.

(c) Write the importance of fructose assessment in semen. 2 + 4 + 2

3. (a) State the role of FSH and testosterone on spermatogenesis.

(b) Write the principle of indirect pregnancy test. (2 + 2) + 3

*Or*

(a) Describe any one immunological contraceptive for family planning.

(b) Write the different precautions those should be adopted for the quality control of semen collection. 4 + 3

### MODULE – 2

4. Answer any *five* of the following : 1 × 5

(a) Write the full forms of IUI and IVF.

(b) What is meant by swimming up technique for sperm preparation ?

- (c) What is meant by antisperm antibody ?
- (d) How do you determine the date of ovulation by laboratory investigation ?
- (e) Write the names of the cells present along the surface of the oocyte ~~at~~ <sup>at</sup> the time of ovulation.
- (f) What is meant by tubular ciliary syndrome ?
- (g) Write any two causative factors for male infertility.
- (h) What is the source of zinc in semen ?

5. (a) Write the fundamental steps followed in IUI.

(b) State the advantages of IUI over IVF. 5 + 3

Or

(a) Mention the full form of MAR test and state its principle.

(b) State the steps and the importance of this test.

(1 + 2) + (3 + 2)

6. (a) Write the principle of fluorescence immuno bead test for the assessment of ascrosome.
- (b) State the steps and the significance of this test. 2 + (3 + 2)

*Or*

- (a) Why male infertility is noted in diabetic patient ?
- (b) Why sperms are very much prone to ROS ?
- (c) "Hypothyroidism may lead to male infertility." Justify the statement. 3 + 2 + 2
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