2019

MSc

2nd Semester Examination

Bio Medical Laboratory Science & Management (Theory)

PAPER – BML-201

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their Own words as far as practicable.

Illustrate the answers wherever necessary.

Group A

1. Answer any *four* of the following : 4×2=8

a) What do you mean by spermatocyto genesis and spermiation ?

b) Write the full forms of IVI and IUI

c) What do you mean by primary hypogonadism?

d) Write the clinical importance of HOS test.

e) Write the full forms of MMP & TIMMP.

f) What is cortical reaction?

g) State the major importance of acrosome in fertilization.

h) 'Only one sperm enters the oocyte'. State why?

Group B

2. Answer any *four* of the following : 4×4=16

a) State the principle of sperm viability test. Write the reference value of viable sperm in semen. 2½+1½=4

b) Write any four major causes of female infertility. 4

c) State any four preconditioning when IUI is adopted for fertility induction. 4

d) Discuss about the inhibition of anterior pituitary secretion of LH and FSH by testosterone. 4

e) Describe the steps adopted for collection of supergrade quality of sperm in IUI. 4

f) Write the composition of sperm diluting fluid and represent the conversion of sperm count in 40X field into count/ml as per dilution in a tabular form. 1½+2½=4

g) Write the role of insulin and thyroxine on spermatogenesis. 2 +2 = 4

h) Clasify sperms on the basis of head morphology and tail morphology. 2 + 2 = 4

Group C

3. Answer any *two* of the following : 2×8=16

a) State when ICSI is adopted exclusively for infertility management. Write the process of oocytes collection through 'ultrasound guided transvaginal technique'. State the process of naked oocyte preparation in vitro from 'oocyte-cumulus-corona' complex. 2+3+3=8

b) State the hormonal treatment regimen for induction of superovulation. Write the technique for insemination of sperm in uterus for fertility induction. Why 100% success is not achieved even in ICSI? 3+3+2=8

(c) Write the principle of HOS test. State the procedure of the HOS test. Write the clinical importance of HOS test. 2+4+2=8

d) 'One primary spermatocyte is converted to four spermatozoa via spermatogenesis' – Explain. 6 + 2 = 8

How does acrosomal reaction help in penetration of ovum?