SWAMI RAMA HIMALAYAN UNIVERSITY
Ph.D. COURSE WORK, END SEMESTER ASSESSMENT
SEPTEMBER - 2021

Subject Name: ADVANCES IN BRAIN AND MIND SCIENCE   Subject Code: PHDBM110

Time allotted: 3 Hours   Max Marks: 60

Note: The candidate is required to attempt all questions. The paper comprises of one question each from   Unit – I, Unit-II, Unit-III, Unit –IV and Unit-V of the course syllabus.

Q.1.

   a. Write Short note on Action Potential (Physiology).   **2 Marks**

   b. Describe Anatomical aspects of Autonomic nervous system.   **4 Marks**

   c. Describe the physiological aspects of "Synapses" and their mode of functions in normal human.   **6 Marks**

Q.2.

   a. Name the pranayamas mentioned in Hatha Yoga Pradipika.   **2 Marks**

   b. Describe kleshas in brief.   **4 Marks**

   c. What do you understand by ashtanga yoga?   **6 Marks**

Q.3.

   a. What do you understand about the nature of human motivation?   **2 Marks**

   b. How would you characterize and define intelligence?   **4 Marks**

   c. Describe the principal of classical conditioning with the experiments done by Pavlov.   **6 Marks**

Q.4.

   a. Write short note on Gamma wave in EEG.   **2 Marks**

   b. What is quantitative EEG and how it helps in analyzing the behavior?   **4 Marks**

   c. Write in detail about Types of memory process. .   **6 Marks**

Q.5.

   a. Enumerate various parameters that is monitored during biofeedback.   **2 Marks**

   b. Explain in brief the principle of functional MRI.   **4 Marks**

   c. Enumerate various brain stimulating techniques. Describe briefly the principle of use of tDCS and its indications.   **6 Marks**

****

SWAMI RAMA HIMALAYAN UNIVERSITY
Ph.D. COURSE WORK, END SEMESTER ASSESSMENT
SEPTEMBER - 2021

Subject Name: ADVANCES IN BIOTECHNOLOGY   **Subject Code: PHDBT110**

Time allotted: 3 Hours   **Max Marks: 60**

Note: The candidate is required to attempt all questions. The paper comprises of one question each from Unit – I, Unit-II, Unit-III, Unit –IV and Unit-V of the course syllabus.

Q.1.

   a. Name four extremophiles.   **2 Marks**

   b. What are the methods of waste water treatment?   **4 Marks**

   c. Role of methanogens in greenhouse effect and energy production.   **6 Marks**

Q.2.

   a. What are yeast episomal plasmids?   **2 Marks**

   b. Give the structure and use of YAC vector.   **4 Marks**

   c. Discuss briefly about colony and plaque hybridization probing.   **6 Marks**

Q.3.

   a. What is antisense technology?   **2 Marks**

   b. Comment on production of therapeutic proteins in plants.   **4 Marks**

   c. What do you understand by molecular breeding of plants? Explain with suitable example.   **6 Marks**

Q.4.

   a. What is DNA fingerprinting?   **2 Marks**

   b. Discuss analysis methods of met genomics.   **4 Marks**

   c. Explain the procedure of DNA microarrays.   **6 Marks**

Q.5.

   a. What is epigenetic analysis?   **2 Marks**

   b. Why do you need to study genomes and proteomes of patients suffering from specific diseases?   **4 Marks**

   c. Comment on the genome projects on model organisms.   **6 Marks**

****

SWAMI RAMA HIMALAYAN UNIVERSITY
Ph.D. COURSE WORK, END SEMESTER ASSESSMENT
SEPTEMBER - 2021

COURSE TITLE – ADVANCES IN FINANCE MANAGEMENT
Time – 3 hours

SUBJECT CODE – PHDMG111
Maximum Marks – 60

Note: The candidate is required to attempt all questions. The paper comprises of one question each from Unit – I, Unit-II, Unit-III, Unit –IV and Unit-V of the course syllabus.

Q1.
  a. Discuss the purpose of realization concept.   **2 marks**
  b. Discuss the role of Accounts in present day economy.   **4 marks**
  c. Write down your views regarding the purpose served by Financial Statements.   **6 marks**

Q2.
  a. Name the sources of external commercial borrowings.   **2 marks**
  b. Name the various financial techniques to evaluate the performance of the business.   **4 marks**
  c. Mention the significance of Information & Technology in Modern Accounting System.   **6 marks**

Q3.
  a. Mention two steps to reduce the length of the *Operating Cycle*.   **2 marks**
  b. Discuss the determinants of Dividend Policies.   **4 marks**
  c. Write down your views regarding the assessment of financial position of a company from the point of view of an investor.   **6 marks**

Q4.
  a. Write down the limitation of published financial statements.   **2 marks**
  b. Write down a short note on Indian Capital Markets.   **4 marks**
  c. Discuss the effects of "Fixed Operating Costs" over performance of the organizations.   **6 marks**

Q5.
  a. Write down a short note on *Beta Factor*.   **2 marks**
  b. Mention the purpose of framing Accounting Standards.   **4 marks**
  c. Write down the ways a Financial Manager would respond under uncertainty.   **6 marks**

SWAMI RAMA HIMALAYAN UNIVERSITY
Ph.D. COURSE WORK, END SEMESTER ASSESSMENT
SEPTEMBER - 2021

Subject Name: ADVANCES IN HOSPITAL ADMINISTRATION   **Subject Code: PHDHA110**

Time allotted: 3 Hours

Max Marks: 60

Note: The candidate is required to attempt all questions. The paper comprises of one question each from   Unit – I, Unit-II, Unit-III, Unit –IV and Unit-V of the course syllabus.

Q.1.

a. What is matching in case control studies?   **2 Marks**

b. Describe the Measures of mortality   **4 Marks**

c. Enumerate the non-modifiable risk factors of NCD. Describe the gaps in the natural history of chronic disease.   **6 Marks**

Q.2.

a. What is PACS?   **2 Marks**

b. What must be taken into account while designing a hospital to ensure infection prevention?   **4 Marks**

c. Write a note on importance of designing ventilation systems and its parameters in OT and ICU.   **6 Marks**

Q.3.

a. Define term 'deficiency' as per Consumer Protection Act as applicable to Medical Services.   **2 Marks**

b. Define Elements & advantages of TQM.   **4 Marks**

c. What are the causes of increase in acts of violence against healthcare providers?   **6 Marks**

Q.4.

a. "Employees as asset of hospital". Write two supporting comments.   **2 Marks**

b. What is contribution pattern of ESI Health Scheme and who all are eligible beneficiaries?   **4 Marks**

c. Explain the planning requirements of the hospital emergency across different phases, namely Pre disaster phase, Disaster phase and Post disaster phase.   **6 Marks**

Q.5.

a. Give any two objective of advertising,   **2 Marks**

b. What are the various marketing tactics to engage the customers?   **4 Marks**

c. In what ways is healthcare different from other industries, and to what extent do these differences affect marketing?   **6 Marks**

****

SWAMI RAMA HIMALAYAN UNIVERSITY
Ph.D. COURSE WORK, END SEMESTER ASSESSMENT
SEPTEMBER - 2021

Subject Name: ADVANCES IN HUMAN RESOURCE MANAGEMENT   **Subject Code: PHDMG112**

Time allotted: 3 Hours   **Max Marks: 60**

Note: Note: The candidate is required to attempt all questions. The paper comprises of one question each from Unit – I, Unit-II, Unit-III, Unit –IV and Unit-V of the course syllabus.

Q.1.

a. What is the difference between succession planning and talent management practices?   **2 Marks**

b. How can you retain the talent in the organization during a recession and without a dedicated budget?   **4 Marks**

c. Outline new trends in performance management in India.   **6 Marks**

Q.2.

a. Why corporate branding is important for organizations?   **2 Marks**

b. What is the importance of employer branding?   **4 Marks**

c. Why EVP is internal and employer brand is external?   **6 Marks**

Q.3.

a. How do you incorporate employee work life balance feedback in the day-to-day operations?   **2 Marks**

b. What are some ethical reasons for the active pursuit of diversity?   **4 Marks**

c. Explain the concept of Quality of work life. Discuss how organizations are ensuring Quality of work life in their organization?   **6 Marks**

Q.4.

a. What are the characteristics of emotional intelligence?   **2 Marks**

b. Can the EI of an individual be improved? If Yes, How?   **4 Marks**

c. Explain the important selection criterion to be considered while selecting an expatriate for an international assignment.   **6 Marks**

Q.5.

a. What are the best social recruitment sites?   **2 Marks**

b. What are the non-perennial and non-permanent jobs which can be assigned to contract labour?   **4 Marks**

c. What are the recent trends in recruitment? How can recruitment planning help in effective recruitments?   **6 Marks**

****

SWAMI RAMA HIMALAYAN UNIVERSITY
Ph.D. COURSE WORK, END SEMESTER ASSESSMENT
SEPTEMBER - 2021

Subject Name: ADVANCES IN BIOTECHNOLOGY   **Subject Code: PHDBT110**

Time allotted: 3 Hours   **Max Marks: 60**

Note: The candidate is required to attempt all questions. The paper comprises of one question each from   Unit – I, Unit-II, Unit-III, Unit –IV and Unit-V of the course syllabus.

Q.1.

   a.   Name four extremophiles.   **2 Marks**

   b.   What are the methods of waste water treatment?   **4 Marks**

   c.   Role of methanogens in greenhouse effect and energy production.   **6 Marks**

Q.2.

   a.   What are yeast episomal plasmids?   **2 Marks**

   b.   Give the structure and use of YAC vector.   **4 Marks**

   c.   Discuss briefly about colony and plaque hybridization probing.   **6 Marks**

Q.3.

   a.   What is antisense technology?   **2 Marks**

   b.   Comment on production of therapeutic proteins in plants.   **4 Marks**

   c.   What do you understand by molecular breeding of plants? Explain with suitable example.   **6 Marks**

Q.4.

   a.   What is DNA fingerprinting?   **2 Marks**

   b.   Discuss analysis methods of met genomics.   **4 Marks**

   c.   Explain the procedure of DNA microarrays.   **6 Marks**

Q.5.

   a.   What is epigenetic analysis?   **2 Marks**

   b.   Why do you need to study genomes and proteomes of patients suffering from specific diseases?   **4 Marks**

   c.   Comment on the genome projects on model organisms.   **6 Marks**

****

SWAMI RAMA HIMALAYAN UNIVERSITY
Ph.D. COURSE WORK, END SEMESTER ASSESSMENT
SEPTEMBER - 2021

Subject Name: ADVANCES IN IMMUNOLOGY   **Subject Code: PHDIM110**

Time allotted: 3 Hours   **Max Marks: 60**

Note: The candidate is required to attempt all questions. The paper comprises of one question each from Unit – I, Unit-II, Unit-III, Unit –IV and Unit-V of the course syllabus.

Q.1.

   a. Describe structure of antibodies.   **2 Marks**

   b. Describe role of multivalency and antigenic threshold in generating protective antibody response   **4 Marks**

   c. Describe how NFAT transcription factor is formed?   **6 Marks**

Q.2.

   a. Discuss complement system evasion strategy evolved by staphylococcus aureus   **2 Marks**

   b. Describe acute phase reactants.   **4 Marks**

   c. Describe type 1 hypersensitivity   **6 Marks**

Q.3.

   a. Describe principle of electrophoresis.   **2 Marks**

   b. Describe principles of real time PCR.   **4 Marks**

   c. Describe principles of multiplex cytokine assays.   **6 Marks**

Q.4.

   a. Discuss pathogenesis of transfusion associated acute lung injury (TRALI).   **2 Marks**

   b. Describe principle of dendritic cell vaccine.   **4 Marks**

   c. Describe various types of blood transfusion reaction   **6 Marks**

Q.5.

   a. Enumerate various indications of hematopoietic stem cell transplantation   **2 Marks**

   b. Describe how maternal immune system tolerates fetus in utero?   **4 Marks**

   c. Describe pathogenesis of Graft versus host disease.   **6 Marks**

****

SWAMI RAMA HIMALAYAN UNIVERSITY
Ph.D. COURSE WORK, END SEMESTER ASSESSMENT
SEPTEMBER - 2021

Subject Name: ADVANCES IN MICROBIOLOGY **Subject Code: PHDMB110**

Time allotted: 3 Hours **Max Marks: 60**

Note: Note: The candidate is required to attempt all questions. The paper comprises of one question each from Unit – I, Unit-II, Unit-III, Unit –IV and Unit-V of the course syllabus.

Q.1.

   a. Define single cell protein. **2 Marks**

   b. What is Algal bloom? Write the role of algae in biofuel production. **4 Marks**

   c. Discuss the most economical procedure of waste water treatment. **6 Marks**

Q.2.

   a. Write about anti-tubercular therapy (ATT). **2 Marks**

   b. Write a note on Germ theory of diseases **4 Marks**

   c. Describe ZN staining and explain the methods of drug susceptibility testing. **6 Marks**

Q.3.

   a. Define Biomagnification. **2 Marks**

   b. Discuss about GMO and their impact **4 Marks**

   c. Explain the method of mineral leaching and recovery by microorganisms. **6 Marks**

Q.4.

   a. Define microbial fermentation **2 Marks**

   b. Describe Human insulin. **4 Marks**

   c. Explain the process of vaccine production and vaccine types **6 Marks**

Q.5.

   a. Define blotting. **2 Marks**

   b. Discuss the major steps of cDNA synthesis. **4 Marks**

   c. Describe the procedure of gene cloning **6 Marks**

****

SWAMI RAMA HIMALAYAN UNIVERSITY
Ph.D. COURSE WORK END SEMESTER ASSESSMENT
September - 2021

Subject Name: RESEARCH METHODOLOGY　　　　　　　　　　**Subject Code: PHDRM100**

Time allotted: 3 Hours　　　　　　　　　　　　　　　　　　　**Max Marks: 60**

Note: The candidate is required to attempt all questions. The paper comprises of three sections. Section A contains one question each from Unit – I, Unit-II & Unit-III. Section B contains one question from Unit –IV and Section C contains one question from Unit-V of the syllabus.

SECTION A

Q.1.

    a. What is the Importance of Health Research?　　　　　　　　　**2 Marks**

    b. Explain the Design of a research project.　　　　　　　　　　**4 Marks**

    c. Define Research and give a brief account of different types of researches.　　**6 Marks**

Q.2.

    a. Draw a flow chart showing various steps of a RCT.　　　　　　**2 Marks**

    b. Differentiate between the descriptive and analytical research methods.　　**4 Marks**

    c. Define experimental error and bias. Describe the types of error common in experimental research and provide examples.　　**6 Marks**

Q.3.

    a. Give two examples of a disguised question.　　　　　　　　　**2 Marks**

    b. What are the merits and demerits of an closed ended question?　**4 Marks**

    c. What is an open ended question? Why and when is it used?　　**6 Marks**

SECTION B

Q.4.

    a. Briefly explain steps involved in a simple random method when you have to select 3 out of 10 students for an event.　　**2 Marks**

    b. Explain the difference between population & sample.　　　　　**4 Marks**

    c. What is sampling and why is it done?　　　　　　　　　　　　**6 Marks**

SECTION C

Q.5.

    a. What is paraphrasing?　　　　　　　　　　　　　　　　　　**2 Marks**

    b. Explain plagiarism, and its importance in research.　　　　　　**4 Marks**

    c. What is the purpose of Discussion section in a Ph.D. thesis?　　**6 Marks**

****

SWAMI RAMA HIMALAYAN UNIVERSITY
Ph.D. COURSE WORK, END SEMESTER ASSESSMENT
SEPTEMBER - 2021

Subject Name: Research & Publication Ethics **Subject Code:** PHDRPE100

Time allotted: 3 Hours **Max Marks: 60**

Note: Note: The candidate is required to attempt all questions. The paper comprises of one question each from Unit – I, Unit-II, Unit-III, Unit –IV and Unit-V of the course syllabus.

Unit I

Q.1.

a. Define Philosophy in your own words. Write any one definition of Philosophy given by any renowned philosopher. **2 Marks**

b. Describe the scope of Philosophy in detail. **4 Marks**

c. Describe Moral philosophy. What is relationship between moral judgements and reactions? **6 Marks**

Unit II

Q.2.

a. What are the ethical norms for compensation of participating subjects in Research? **2 Marks**

b. Describe the importance of confidentiality and privacy protection of subjects involved in research. **4 Marks**

c. Describe the four cardinal pillars of ethics in biomedical research as described in Belmont Report. **6 Marks**

Unit III

Q.3.

a. When is informed Consent Required? **2 Marks**

b. What is defined as a redundant publication? What's the first step to be taken in an investigation of misconduct and who should take the first step? **4 Marks**

c. Does the responsibility lie with an editor or with publishing staff to solve cases where authors cannot agree about their authorship roles (e.g. corresponding author versus co-authors) and the order of appearance in the paper? Or is this an issue for their institution? **6 Marks**

Unit IV

Q.4.

a. What are Green and Gold routes of Open Access publishing? **2 Marks**

b. Describe the software tool to check the copyright and self-archiving policies of various publishers. **4 Marks**

c. Describe at least six guidelines to identify predatory journals as developed by Savitribai Phule Pune University (SPPU) **6 Marks**

Unit V

Q.5.

a. Describe any two plagiarism checking software in short. **2 Marks**

b. What are indexing journals? Describe the salient features of Google Scholar and PubMed. **4 Marks**

c. Describe : **6 Marks**
    (i) g-index
    (ii) i10-index
    (iii) CiteScore

****