

ENTRANCE EXAMINATION – 2017

Ph.D. Health Sciences*(Ph.D Admission - January' 2018 Session)*

Hall Ticket No. _____

Duration : 2 hours Total Marks : 80 (Part – I: 40 + Part – II: 40)

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY BEFORE ANSWERING.

INSTRUCTIONS

1. Write your Hall Ticket Number on the first page of this booklet AND on the OMR Sheet.
2. This booklet has **Sixteen (16)** pages. Please check thoroughly for all the pages.
3. There are two PARTS in the question paper – **PART- I** (Q.Nos. 1-40) and **PART-II** (Q.Nos. 41-80). In case of tie, marks obtained in **PART- I** will be considered for resolving the tie. PART - I is common to the 2 streams of study.
4. **PART – II** is organized as follows and clearly highlighted and color coded :

B : Nursing	OR
C : Optometry and Vision Science	
5. **PART- I** is common and compulsory for the two streams and the candidates should select the stream (**B or C**) as applicable to them for **PART- II**. ONLY ONE STREAM CAN BE ANSWERED BY ANY CANDIDATE AND HAS TO BE MARKED CLEARLY ON THE **OMR ANSWER SHEET**.
6. All answers should be marked clearly in the OMR answer sheet only.
7. **There is negative marking** for first 25 questions in **PART-I** only. For each wrong answer **0.33 mark** will be deducted.
8. **Candidate should write and darken the correct Booklet Code for PART-II in the OMR Answer Sheet, without which the OMR will not be evaluated. The candidates defaulting in marking the Booklet Code in the OMR shall not have any claim on their examination and University shall not be held responsible.**
9. Hand over the **OMR answer sheet** at the end of the examination to the Invigilator.
10. Scientific calculators are not permitted.

PART I (COMMON TO THE 2 STREAMS OF STUDY).
NOTE THERE IS NEGATIVE MARKING FOR THE FIRST 25 QUESTIONS

- 1. Agriculture refers to science and art of:**
 - A. Cultivating the soil
 - B. Raising crops
 - C. Rearing cattle
 - D. All of above

- 2. ABC in First Aid refers to:**
 - A. Airway, Breathing & Circulation
 - B. Affordable, Balanced & Cost Effective
 - C. Airway, Breathing, & Communication
 - D. Assistance, Blood & Circulation

- 3. The '108' service in India refers to all except:**
 - A. Emergency Medical Service
 - B. Emergency Police Service
 - C. Emergency Fire Service
 - D. Emergency Child Protection Service

- 4. Autism refers to:**
 - A. Infection caused by self
 - B. Temporary illness that cures itself as the child grows
 - C. A disorder of neural development characterized by impaired social interaction
 - D. Disorder where the individual is deaf and dumb

- 5. The acronym "SOP" stands for _____.**
 - A. sample operational plan
 - B. single operational plan
 - C. standard operating plan
 - D. standard operating procedure

- 6. Which of the following is not an ethical guideline for conducting research with humans?**
 - A. Getting informed consent of the participant
 - B. Telling participants they must continue until the study has been completed
 - C. Keeping participants' identity anonymous
 - D. Telling participants they are free to withdraw at any time.

- 7. "Bioinformatics" encompasses all these disciplines except:**
 - A. Medicine
 - B. Sociology
 - C. Maths/Physics
 - D. Biology

- 8. Food Hygiene includes all systems, measures and practices related to food except:**
 - A. Production
 - B. Disposal
 - C. Processing
 - D. Storage

9. MIS stands for:

- A. Management interview systems
- B. Management integrated systems
- C. Management information systems
- D. Management integrity systems

10. "TAEKWONDO" refers to a:

- A. Chinese medicine
- B. Korean Martial art
- C. Japanese tea
- D. Taiwanese fabric

11. The South African nation is described as a Rainbow nation and is attributed to:

- A. Nelson Mandela
- B. Oliver Tambo
- C. Thabo Mbeke
- D. Desmond Tutu

12. Society is defined as:

- A. A conglomeration of people
- B. A group of people bound by rules
- C. An association with regulated membership
- D. An organized association patterned on the norms of interaction

13. A family of married couple with their children is:

- A. Joint
- B. Extended
- C. Nuclear
- D. Intergenerational

14. "Body language" is an example of which type of communication?

- A. Auditory
- B. Olfactory
- C. Tactile
- D. Visual

15. A badge that records exposure to radiation that is worn when taking x-rays is called:

- A. Filtration
- B. Lead shield
- C. Dosimeter
- D. Grid

16. Which of the following constitute Indian systems of medicine?

- A. Ayurveda
- B. Unani
- C. Siddha
- D. All of the above

17. For Qualitative Research, the data is in the form of:

- A. Numbers
- B. Words
- C. Integers
- D. Fractions

18. Which of the following is not a member of United Nations?

- A. ILO
- B. WHO
- C. IMF
- D. MSF

19. The headquarters of International Court of Justice (ICJ) is in:

- A. Rome, Italy
- B. Hague, Nederland
- C. Paris, France
- D. Geneva, Switzerland

20. The primary granting agency through which the United States government conducts and supports biomedical research is the _____.

- A. National Science Foundation (NSF)
- B. National Institutes of Health (NIH)
- C. United States Dept. of Agriculture (USDA)
- D. National Institutes of Aging (NIA)

21. "Anthropology" is a study of:

- A. Primates
- B. Humankind
- C. Arthropods
- D. None of the Above

22. One of the following is not a measure of average:

- A. Mean
- B. Median
- C. Mode
- D. Meridian

23. Understanding and identifying with a person's situation and feelings is known as:

- A. Pitying
- B. Grieving
- C. Empathy
- D. Sympathy

24. A titer refers to the concentration of _____.

- A. an antigen in a vaccine
- B. an antibody in a vaccine
- C. an antibody in a blood sample
- D. an antigen needed to stimulate antibody response

25. A hypothesis is _____.

- A. a review of the current literature on a scientific subject
 - B. a concise step-by-step schedule of experimental work to be performed
 - C. a description of the methods to be used for data assessment
 - D. a theory to explain the scientific question or problem
-

26. Which method or euthanasia requires the use of a guillotine?

- A. cervical dislocation
- B. decapitation
- C. Electrocution
- D. CO₂ overdose

27. Samuel Hahnemann created an alternative system of Medicine called:

- A. Naturopathy
- B. Homeopathy
- C. Allopathy
- D. Osteopathy

28. The construct of Gender is:

- A. Biological
- B. Sociological
- C. Physical
- D. Supernatural

29. Cohort refers to:

- A. A group of people sharing certain common characteristics
- B. A protein
- C. A carbohydrate
- D. A fat

30. Standard deviation is the deviation of an individual value from the:

- A. Median
- B. Mode
- C. Range
- D. Mean

31. The best word that describes the following sentence: 'sample taken from a population should be'

- A. Representative
- B. Best in quality
- C. Precise
- D. Confident

32. Which of the following is the correct formula for the conversion of Celsius degrees to Fahrenheit degrees?

- A. $F = 5/9(C - 32)$
- B. $C = 5/9(F - 32)$
- C. $F = 9/5(C - 32)$
- D. $C = 9/5(F - 32)$

33. "Behavior" includes:

- A. An organism's muscular or glandular response to stimulation that is observed
- B. The way that an organism responds to stimulation.
- C. The unique or predictable reaction of a "thing" to specific conditions.
- D. All of the above

34. A "soprano":

- A. Swims
- B. Sleeps
- C. Sings
- D. Dreams

35. "Faux Pas" is a:

- A. Tool
- B. Mistake
- C. Address
- D. Title

36. In 1936, Gandhiji shifted his ashram from a village Segaoon to Sabarmathi. What new name did Gandhiji give this village?

- A. Sevagaon
- B. Sevawadi
- C. Savanthwadi
- D. Sewagram

37. Who are the only people who can send in requests for songs in AIR-Vividhabharathi's programme called "Jayamala"?

- A. Sportsmen
- B. Armed Forces
- C. Politicians
- D. Women

38. Inter quartile range is the difference between:

- A. 25% and 50% of values
- B. 25% to 75% of values
- C. 50-75% of values
- D. 0-25% of values.

39. A nosocomial infection refers to:

- A. Infection acquired from animals
- B. Infection acquired by a neonate from the mother during delivery
- C. Infection acquired in a hospital.
- D. Infection acquired at farms.

40. In law what is a subpoena?

- A. A writ commanding a witness to appear before a court of law.
- B. A summons which isailable
- C. A summons which is non-bailable
- D. A criminal act committed

PART II (CODE B – NURSING)

41. Which of the following currently present a significant health challenge globally?
- A. HIV/AIDS
 - B. Malaria
 - C. Diarrheal diseases
 - D. Cardiovascular disease
42. The World Health organization has identified health as which of the following dimensions?
- A. Physical, vocational, ethnic
 - B. Emotional, social, and spiritual
 - C. Physical, mental, and social
 - D. Spiritual, vocational, and gender-related
43. The skill development domain of learning is which of the following?
- A. Cognitive
 - B. Physical
 - C. Affective
 - D. Psycho-motor
44. What supplemental medication is most frequently ordered in conjunction with furosemide (Lasix)?
- A. Chloride
 - B. Digoxin
 - C. Potassium
 - D. Sodium
45. The position of patient during immediate postoperative period of tonsillectomy surgery is
- A. Sim's position
 - B. Prone position
 - C. Lateral position
 - D. Rose position
46. Preventative steps that stop a health problem before it starts is called?
- A. Primary prevention
 - B. Secondary prevention
 - C. Wellness
 - D. Health education
47. The saturation level of oxygen in the blood can be assessed by using:
- A. Spirometer
 - B. Pulse oximetry
 - C. Tonometer
 - D. Cardiac monitor
48. Approximately fifty percent of premature illnesses and death is related to?
- A. Cancer and heart disease.
 - B. Participation in risky health behaviors.
 - C. Motor vehicle accidents.
 - D. Chewing tobacco.

49. **The volume of air that moves in and out of lungs with each respiration is:**
- A. Tidal volume
 - B. Minute volume
 - C. Lung capacity
 - D. Lung reserve
50. **Core body temperature is:**
- A. Skin temperature
 - B. Axilla temperature
 - C. Rectal temperature
 - D. Oral temperature
51. **In which position, do you keep a patient during an asthmatic episode?**
- A. Sim's position
 - B. Prone position
 - C. Supine position
 - D. Fowler's position
52. **Elementary and middle-level school physical education should emphasize all but which one of the following:**
- A. cardiovascular health
 - B. coordination and good posture
 - C. athletic skill development
 - D. agility and flexibility
53. **According to Erikson "a sense of industry develops during":**
- A. Infancy
 - B. Toddler period
 - C. Preschool age
 - D. School age
54. **The study of distribution and determinants of the disease is called:**
- A. Epidemiology
 - B. Entomology
 - C. Pathology
 - D. Community
55. **Presenting a reward following a behaviour to increase the likelihood that the behaviour will be repeated is called:**
- A. Positive reinforcement
 - B. Situational inducement
 - C. Modelling
 - D. Shaping
56. **The type of necrosis seen in tuberculosis is:**
- A. Coagulative necrosis
 - B. Liquefactive necrosis
 - C. Caseous necrosis
 - D. Gangrenous necrosis

57. While working in a psychiatric unit, you would assess the patient's cognitive status with help of?
- A. Mini mental status examination
 - B. Rating tool
 - C. Process recording
 - D. Advanced technology
58. Which of the following is a social motive?
- A. Hunger
 - B. Thirst
 - C. Pain avoidance
 - D. Achievement
59. Which of the following scale helps to assess the impaired consciousness
- A. Glasgow coma scale
 - B. Visual analogue scale
 - C. Beck Depression scale
 - D. Muscle power grade scale
60. Which of the following determinants of health is a 'downstream' determinant?
- A. Housing
 - B. Employment
 - C. Age
 - D. Education
61. ICDS scheme is delivered in villages through:
- A. Auxiliary nurse and midwives
 - B. Multipurpose workers
 - C. Accredited social health activists
 - D. Anganwadi workers
62. Which structure helps prevent food from entering the trachea?
- A. Alveoli
 - B. Diaphragm
 - C. Epiglottis
 - D. Villi
63. In DOTS strategy 'D' & 'O' stand for which of the following:
- A. Drug out
 - B. Directly observed
 - C. Daily observed
 - D. Daily order
64. Reasoning from General to Particular is called?
- A. Deduction
 - B. Induction
 - C. Observation
 - D. Experience

65. Which of the following is necessary in obtaining informed consent?

- A. A description of the statistical analyses that will be carried out
- B. A description of the purpose of the research
- C. A description of the reliability and validity of test instruments
- D. A list of publications that the researcher has had in the last ten years

66. IRB is an acronym for which of the following?

- A. Internal Review Board
- B. Institutional Rating Board
- C. Institutional Review Board
- D. Internal Request Board

67. In the SMART objective, M stands for _____

- A. Modifiable
- B. Measurable
- C. Meaningful
- D. Moderate

68. Education is derived from a Latin word?

- A. educate
- B. educere
- C. evolution
- D. learning

69. Education according to John Dewey is?

- A. preparation for life
- B. getting knowledge
- C. learning to do by doing
- D. schooling

70. The sum of curricular and co-curricular activities is?

- A. Aim
- B. Curriculum
- C. Pedagogy
- D. Summative evaluation

71. Which of the following is an example of primary data?

- A. Book
- B. Journal
- C. News Paper
- D. Census Report

72. ICSSR stands for:

- A. Indian Council for Survey and Research
- B. Indian Council for Strategic Research
- C. Indian Council for Social Science Research
- D. Inter National Council for Social Science Research

73. Observation of an event personally by the observer is

- A. Indirect observation
- B. Direct observation
- C. Controlled observation
- D. Uncontrolled observation

74. How can you interpret a patient's fear of being in situations or places that may be difficult or embarrassing to leave as evidence of _____

- A. Social phobia
- B. Generalized anxiety disorder
- C. Agoraphobia
- D. Panic disorder

75. Which of the following infection control measures is directed toward reducing or eliminating the source or reservoir of infection?

- A. Prophylactic antimicrobial therapy
- B. Passive immunization
- C. Social distancing
- D. Pasteurization of milk

76. Which of the following remarks 'esprit d corps' among the members of the unit.?

- A. "Let's work together in harmony; we need to be supportive of one another"
- B. "In order that we achieve the same results; we must all follow the directives of Julius and not from other managers."
- C. "We will ensure that all the resources we need are available when needed."
- D. "We need to put our efforts together in order to raise the bar of excellence in the care we provide to all our patients."

77. As a manager, she focuses her energy on both the quality of services rendered to the patients as well as the welfare of the staff of her unit. Which of the following management styles does she adopt?

- A. Country club management
- B. Organization man management
- C. Team management
- D. Authority-obedience management

78. Which term refers to publishing several articles from the data collected in one large study?

- A. Duplicate publication
- B. Partial publication
- C. Triplicate publication
- D. None of these

79. What is it called when the participants are not revealed to anyone but researcher and staff?

- A. Confidentiality
- B. Anonymity
- C. Ethics
- D. Discretion

80. In which of Likert's four systems of leadership, managers do not have complete confidence and trust in subordinates but nevertheless, solicit advice from subordinates while retaining the right to make final decision?

- A. Participative leadership style
- B. Benevolent-authoritative leadership style
- C. Consultative leadership style
- D. Exploitative-authoritative leadership style

PART II (CODE C - OPTOMETRY AND VISION SCIENCES)

- 41. Dolman card is used
 - A. For convergence exercise
 - B. For accommodative rock exercise
 - C. To test dominant eye
 - D. None of the above

- 42. A pencil of ray emerges from a lens with a vergence of +6:00D what is its vergence after a travel of 10 mm
 - A. +6.38 D
 - B. +7.00 D
 - C. -6.38 D
 - D. -7.00D

- 43. Express the visual acuities 6/9, and 6/36 in decimal notation?
 - A. 0.71,0.42
 - B. 0.67,0.17
 - C. 0.81,0.32
 - D. 0.76,0.77

- 44. A pin hole less than 1.00 mm would impair vision by increasing the size of
 - A. Airy disc
 - B. Scheiner disc
 - C. Blue disc
 - D. None of the above

- 45. A myope is found to require -12:00D at a vertex distance of 13mm determine the correction if the vertex distance were altered to 10mm
 - A. -11.58 D
 - B. -12.30 D
 - C. -10.39 D
 - D. -13.00 D

- 46. Duochrome test takes the help of _____ to determine the spherical component of the refractive error
 - A. Transverse chromatic aberration
 - B. Axial chromatic aberration
 - C. Transverse spherical aberration
 - D. Axial spherical aberration

- 47. An emmetrope with 8D of accommodation has a range of accommodation
 - A. From infinity to +125 mm
 - B. From infinity to -111 mm
 - C. From infinity to +111 mm
 - D. From infinity to -125 mm

- 48. Which cranial nerve innervates the four extra-ocular muscles?
 - A. Abducens nerve
 - B. Oculomotor nerve
 - C. Trigeminal nerve
 - D. Vagus nerve

49. Refractive index of aqueous humor is _____?
- A. 1.000
 - B. 1.236
 - C. 1.336
 - D. 1.446
50. Cornea has _____ number of layers
- A. 5
 - B. 4
 - C. 7
 - D. 6
51. If a person with accurate subjective refraction has low NRA value then it would suggest that _____ would also be low?
- A. Positive fusional vergence
 - B. Negative fusional vergence
 - C. Positive relative accommodation
 - D. Amplitude of accommodation
52. Crossed diplopia arises because the image of the near object falls on the _____ retina of each eye on non-corresponding points?
- A. Nasal
 - B. temporal
 - C. superior
 - D. inferior
53. Uncrossed disparity involves a _____ shift of the images in one or both eyes
- A. Nasal
 - B. Temporal
 - C. Superior
 - D. Inferior
54. If dissimilar images are formed on corresponding points _____ results
- A. Binocular diplopia
 - B. Binocular suppression
 - C. Binocular confusion
 - D. Binocular disparity
55. Which is not a test to measure suppression?
- A. Worth four dot test
 - B. Bagolini lenses
 - C. Binocular visual acuity
 - D. Sbisabar
56. The posterior end of which muscle insertion almost overlies the macula
- A. Superior oblique muscle
 - B. Superior rectus muscle
 - C. Inferior rectus muscle
 - D. Inferior oblique muscle

57. Neurons of the second order are derived from which retinal layer

- A. Photoreceptor layer
- B. Outer nuclear layer
- C. Ganglion cell layer
- D. Inner nuclear layer

58. The spherocylindrical transposition of the crossed cylinder $+2.25 \times 120^{\circ}$ with $-1.75 \times 30^{\circ}$ is

- A. $+2.25 \text{ DS} / +4.00 \text{ DC} \times 30^{\circ}$
- B. $+2.25 \text{ DS} / +4.00 \text{ DC} \times 120^{\circ}$
- C. $+2.25 \text{ DS} / -4.00 \text{ DC} \times 120^{\circ}$
- D. $+2.25 \text{ DS} / -4.00 \text{ DC} \times 30^{\circ}$

59. A patient reports that during fogging the line from 2 o'clock to 8 o'clock appears sharpest and darkest. The optometrist should add

- A. Minus cylinder axis 60°
- B. Plus cylinder axis 60°
- C. Minus cylinder axis 120°
- D. Plus cylinder axis 120°

60. Which one of these lenses has the spherical equivalent of $+1.25 \text{ DS}$

- A. $+4.00 \text{ DS} / +2.00 \text{ DC} \times 80^{\circ}$
- B. $+4.00 \text{ DS} / -2.00 \text{ DC} \times 80^{\circ}$
- C. $+2.00 \text{ DS} / +1.50 \text{ DC} \times 80^{\circ}$
- D. $+2.00 \text{ DS} / -1.50 \text{ DC} \times 80^{\circ}$

61. While performing the duochrome test the patient reports that the letters on the green side are clearer what should you do

- A. Add more minus sphere
- B. Add more plus sphere
- C. Remove minus sphere
- D. Remove plus sphere

62. The prism induced while reading 1 cm below the optical centre of the following glasses
OD: $+3.00 \text{ DS} / -1.00 \text{ DC} \times 90^{\circ}$ OS: $+5.00 \text{ DS} / -1.00 \text{ DC} \times 90^{\circ}$ is

- A. OD 3 prism dioptres base up OS 5 prism dioptres base up
- B. OD 3 prism dioptres base down OS 5 prism dioptres base down
- C. OD 2 prism dioptres base up OS 4 prism dioptres base up
- D. OD 2 prism dioptres base down OS 4 prism dioptres base down

63. The spherocylindrical formulation of a lens $+3.00 \text{ DS} / -4.00 \text{ DC} \times 180^{\circ}$ can also be represented as

- A. $-1.00 \text{ DC} \times 90^{\circ}, +3.00 \text{ DC} \times 180^{\circ}$
- B. $+1.00 \text{ DC} \times 180^{\circ}, -3.00 \text{ DC} \times 90^{\circ}$
- C. $-1.00 \text{ DC} \times 180^{\circ}, +3.00 \text{ DC} \times 90^{\circ}$
- D. $+1.00 \text{ DC} \times 90^{\circ}, -3.00 \text{ DC} \times 180^{\circ}$

64. Which of them is not a binocular clue for stereopsis

- A. Retinal disparity
- B. Convergence
- C. Accommodation
- D. Geometrical perspective

65. **Horizontal incomitance with a relative divergence on downgaze with no significant difference between primary and up gaze is termed as**
- A. Y pattern deviation
 - B. Inverted Y pattern deviation
 - C. A pattern deviation
 - D. V pattern deviation
66. **During the base-in vergence at distance a blur indicates**
- A. Insufficient minus in subjective endpoint
 - B. Excessive plus in subjective endpoint
 - C. Insufficient plus in subjective endpoint
 - D. Excessive minus in subjective endpoint
67. **In absence of blur during base-out vergence at distance the break indicates**
- A. Limit of positive fusional vergence
 - B. Limit of negative fusional vergence
 - C. Limit of accommodative amplitude
 - D. None of the above
68. **Right supravergence should be equal to**
- A. Left infravergence
 - B. Left supravergence
 - C. Right infravergence
 - D. None of the above
69. **The amount and direction of the prism that is required to eliminate the fixation disparity reveals**
- A. Dissociated tropia
 - B. Dissociated phoria
 - C. Associated phoria
 - D. Associate tropia
70. **When fitting rigid lenses and assessing the fluorescein pattern you should record:**
- A. Central fluorescein pattern
 - B. Mid periphery
 - C. Edge Clearance
 - D. All of the above
71. **In a 2 alternative forced choice task, where is the threshold set in a frequency of sensing curve?**
- A. 25%
 - B. 50%
 - C. 75%
 - D. 100%
72. **As the specific gravity of the Contact lens increases**
- A. Its weight increases
 - B. Its weight decreases
 - C. Its BVP increases
 - D. Its BVP decreases

73. The idea of directly altering corneal power by either submerging the head in a bowl of water or wearing a water-filled glass hemisphere over the eye was first suggested by

- A. Thomas Young
- B. Aristotle
- C. Pablo Picasso
- D. Leonardo da Vinci

74. Dk/t referes to

- A. Water transmissibility of the contact lens
- B. Area of the BOZD
- C. Oxygen transmissibility of the contact lens
- D. Perimeter of BOZD

75. As a rule of thumb a 0.5 mm increase in the total diameter should accompany _____ increase in the BOZR

- A. 0.5 mm
- B. 0.3 mm
- C. 0.05 mm
- D. 0.03 mm

76. In fitting soft toric lenses LARS rule is used to

- A. Eliminate axis misalignment
- B. Eliminate lens movement
- C. Make the lens fitting steep
- D. Make the lens fitting flat

77. A contact lens prescription of 8.9/13.8/-4.25 means

- A. The contact lens diameter is 8.9 base curve is 13.8 and power is -4.25
- B. The contact lens base curve is 8.9 diameter is 13.8 and power is -4.25
- C. The contact lens diameter is 8.9 power is 13.8 and base curve is -4.25
- D. The contact lens power is 8.9 base curve is 13.8 and diameter is -4.25

78. The following are not true about corneal warpage:

- A. it refers to a change in the corneal curvature associated with contact lens wear
- B. it is more common with rigid gas permeable contact lens
- C. it interferes with the result of biometry
- D. corneal oedema is a feature

79. A contact lens wearer complains that his vision is blurred immediately after blinking. Slit-lamp examination reveals excessive slit-lamp movement. To reduce the movement, you may:

- A. increase the oxygen permeability of the contact lens
- B. increase the thickness of the contact lens
- C. decrease the diameter of the contact lens
- D. increase the base curve of the contact lens

80. The base curve of a contact lens:

- A. refers to its posterior central curvature
- B. is usually measured in dioptries
- C. determines its movement with blinking
- D. all of the above