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2563 – Mulika Piriven Final Examination – 2019 December
(New Syllabus)

NEW

09 E I, II

(09) Health Science – Paper I, II

Three hours

2019.12.27 / 12.30–15.40

Additional Reading Time - 10 minutes

Use **additional reading time** to go through the question paper, select the questions and decide on the questions that you give priority in answering.

Health Science – Paper I

Note :

- * Answer **all** questions. This paper carries **40** marks.
- * In each of the questions from No. **1** to **40**, pick one of the alternatives (1), (2), (3), (4) which is **correct or most appropriate**.
- * **Mark a cross (x)** on the number corresponding to your choice in the answer sheet provided.
- * Further instructions are given on the back of the answer sheet. Follow them carefully.

Part I

1. According to Buddhist philosophy, the body and the world are formed
 - (1) as a result of a creation of an almighty god.
 - (2) as a result of evolution that has been taken place since million years.
 - (3) from the four elements Patavi, Apo, Thejo and Vayo.
 - (4) by autogenesis
2. A healthy environment should be maintained inside piriven in order to achieve “**physical, mental, social and spiritual well - being**” of young monks. The most suitable words that can be used to describe the phrase in bold types are,

(1) health promotion	(2) total health
(3) total personality	(4) good health
- Several activities that were carried out in the siripavara pirivena, based on the concept of Health promotion piriven, are listed below under letters *A*, *B*, *C* and *D*. Answer questions 3, 4 and 5 using these information.
 - (A) Providing clean water facilities
 - (B) Organizing a shramadana campaign to clean the pirivena, with the assistance of neighbours
 - (C) Organizing a dental clinic for the students of the pirivena
 - (D) Dispose of waste appropriately
3. Of the above actions, related to health policies are given by the letters,

(1) <i>A</i> and <i>B</i>	(2) <i>A</i> and <i>D</i>	(3) <i>B</i> and <i>D</i>	(4) <i>C</i> and <i>D</i>
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4. The activity that is aimed at reorganizing the health services at Siripavara pirivena is denoted by the letter,

(1) <i>A</i>	(2) <i>B</i>	(3) <i>C</i>	(4) <i>D</i>
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[See page two

5. The health promotion activity carried out with community participation is denoted by,
(1) A (2) B (3) C (4) D
6. A harmful emotion that could result from an unhealthy piriven atmosphere is,
(1) happiness. (2) sympathy. (3) empathy. (4) displeasure.
7. Select the choice that presents the stages of life in the correct order.
(1) childhood, youth, adolescence, elderly, middle age
(2) childhood, adolescence, youth, middle age, elderly
(3) childhood, adolescence, middle age, youth, elderly
(4) childhood, youth, adolescence, middle age, elderly

- Use the following table containing the names and ages of some bhikkus to answer questions 8 and 9.

Name of the bhikku	Age (years)
Samadhi	09
Sudheera	17
Rahula	25
Wimala	45

8. Of the above bhikkus, the bhikku in the transition stage is,
(1) bhikku Samadhi. (2) bhikku Sudheera.
(3) bhikku Rahula. (4) bhikku Wimala.
9. Bhikku Rahula is,
(1) an dolescent. (2) a youth. (3) in middle age. (4) an elderly.
10. Several changes that can be seen in a bhikku attaining the adolescent age are stated below.
A - Willingness to work independently
B - Becoming creative
C - Becoming sociable
of the above changes, the mental changes are,
(1) A and B (2) A and C (3) B and C (4) A, B and C
11. The elderly monks should **not**,
(1) refrain from consuming inappropriate foods (apathya āhāra).
(2) engage in age - appropriate exercises.
(3) have excessive rest.
(4) discontinue the associations with the community.
12. The choice that contains only the traditional foods is,
(1) Hath maluva, kalawam pala malluma (mixed green leaf preparation), kola kenda, thambum hodi (a gravy made of spices)
(2) Hath maluva, kola kenda, noodles, thambum hodi
(3) Kola kenda, tempered rice, pittu, hath maluwa
(4) Kolo kenda, tempered rice, roti, kalawam pala malluma

● Consider the following facts.

- * Choosing suitable foods
- * Avoiding the consumption of unsuitable foods
- * Consuming the foods knowing the required quantities
- * Consuming the foods at the right time

13. The bhikkus must pay attention to the facts,

- (1) before consuming foods.
- (2) during food consumption.
- (3) after consuming foods.
- (4) when giving foods to others.

14. A negative consequence of consuming foods without knowing the appropriate food quantities required by the body is,

- (1) less chances of contracting diseases.
- (2) becoming light - weighted.
- (3) becoming lazy.
- (4) developing physical strength.

15. Select the correct sentence about the statement and the reason given below.

Statement - It is more suitable to select natural foods when preparing dhana for sangha society

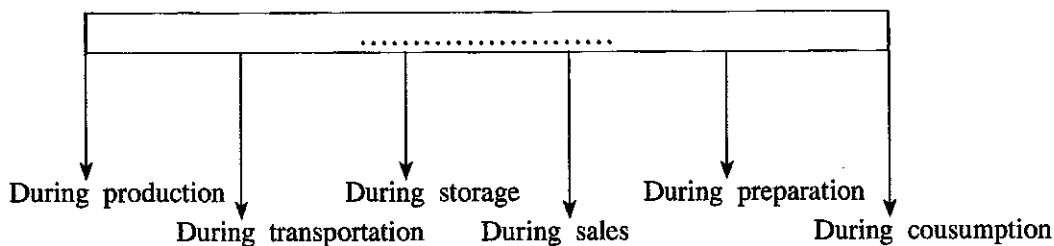
Reason - A good nutritional status should be established within the sangha society

- (1) The statement and the reason are correct.
- (2) The statement and the reason are incorrect.
- (3) The statement is correct and the reason is incorrect.
- (4) The statement is incorrect and the reason is correct.

16. By refusing to follow 'kāmasuḥāllikanu yoga' and 'attakilamathanu yoga' mentioned in Buddhist teachings,

- (1) malnutrition could be avoided
- (2) over nutrition could be avoided
- (3) obesity could be avoided.
- (4) malnutrition and over nutrition could be avoided

17.



Select the most suitable choice to fill in the blank

- (1) Situations in which the nutritive value of foods could be destroyed.
- (2) Situations in which the nutritive value of foods can be improved.
- (3) Situations that allow for food preservation.
- (4) Situations in which nutritive foods can be chosen.

18. The human heart is located,

- (1) in the thoracic cavity, between the two lungs, slightly to the left.
- (2) in the thoracic cavity, between the two lungs, slightly to the right.
- (3) in the thoracic cavity, between the two lungs, slightly to the upward.
- (4) in the thoracic cavity, between the two lungs, slightly to the download.

19. The non-communicable disease related to the circulatory system, which could result from the failure to follow the fifth precept is,

- (1) leukaemia. (2) Hemofelia.
- (3) Catarrh. (4) Cardiac arrest.

20. Some characteristics of a blood vessel type found in the circulatory system are listed below.

- walls are thick and elastic
- blood circulates rapidly within these vessels
- The oxygen concentration in the blood running through these vessels is higher (except for one vessel)

The vessel type that shows the above characteristics is/are

- (1) arteries. (2) veins.
- (3) arteries and veins. (4) capillaries.

21. Consider the following characteristics about mammalian blood cells.

- A - contains a nucleus
- B - produced in the red bone marrow
- C - life span is approximately a week
- D - shows amoeboid movement

of the above characteristics, the letter denoting the characteristic common to red blood cells, white blood cells and platelets is

- (1) A (2) B (3) C (4) D

22. Select the **incorrect** statement out of the following statements.

- (1) The digestive track is can be described as a tube with openings in both ends (top and bottom).
- (2) Water and minerals present in digested foods are absorbed from the large intestine.
- (3) Digested foods are aborbed at the stomach.
- (4) The appendix does not play an important role in digestion.

23. Several functions of the brain are listed below.

- A - Regulates the balance of the body
- B - Regulates the heart beat
- C - Regulates the cognitive functions such as memory, learning and intelligence

The choice that gives the correct order of the parts of the brain which contribute to the above functions is

- (1) cerebellum, brain stem, cerebrum
- (2) cerebellum, cerebrum, brain stem
- (3) brain stem, cerebellum, cerebellum
- (4) brain stem, cerebellum, cerebrum

● Select the most suitable words to fill in the blanks of questions No. 24 to 26.

24. Urine stored in the bladder is excreted through

- (1) kidneys. (2) ureters. (3) nephrous. (4) urinary.

25. activities as an excretory organ in human body.

- (1) skin (2) anul track (3) anul (4) appendix

26. Kidney stones are formed as a result of the deposition ofon kidneys or the bladder.
- (1) calcium oxalate (2) iodine
(3) potassium (4) sodium
27. The body's inherent ability to withstand diseases is called,
- (1) natural oxalate. (2) immunity.
(3) artificial immunity. (4) immunization.
28. The disease that can be eliminated by vaccinating a new-born within the first 24 hours is,
- (1) Polio (2) Tuberculosis (3) Diphtheria (4) Whooping cough
29. The major cause for non-communicable diseases is,
- (1) bad lifestyle
(2) generic factors
(3) bad lifestyle and generic factors
(4) unsafe sexual relationships
30. Some information about a disease is given below. Answer questions No. 31 and 32 based on these information.
- The vectors of this disease are mosquito types *Aedis egypti* and *Aedic albopictus*.
 - The common symptoms of this disease includes high fever that lasts for several days, headache and body pains.
 - During severe conditions of this disease, small red patches of blood appear beneath the skin.
- This disease is,
- (1) Malaria (2) Dengue (3) Filaria (4) Hydrophobia
31. The causative agent of this disease is a
- (1) bacteria. (2) fungus. (3) virus. (4) parasite.
32. According to Rōga sutta of Aanhuttara Nikaya, the three-fold bases of akusala (akusala mūla) responsible for causing mental disorders for humans are
- (1) Vātha, Pitha, Sema (2) Lōbha, Dvesha, Mōha
(3) Āpo, Thejo, Vāyo (4) Shraddha, Buddhi, Vitharka
33. The hormone that is secreted when a person suffers from fear or anger is,
- (1) Adrenaline. (2) Cortisol.
(3) Aldosteron. (4) Noradrenaline.
34. A medical test revealed that a monk can clearly see the objects far away, but has difficulty in seeing the objects located closer. Accordingly, this monk is suffering from,
- (1) long-sightedness. (2) short-sightedness.
(3) colour-blindness. (4) glaucoma.
35. Of the following treatment methods, the treatment method is used to treat mental illnesses,
- (1) experiments (2) holding Bodhi Pooja
(3) observation (4) use of medicine

36. Several steps followed by a first aid-giver after a person met with an accident are stated below.

- keep the patient still
- let the patient lie down on the ground
- cover the patient with a thick blanket
- turn the patient

The above first aid-giver may have been treating a person,

- (1) caught in a fire.
- (2) who was traumatized.
- (3) who was electrocuted.
- (4) who was subjected to a serpent bite.

37. According to 'Charaka', Ayurveda is,

- (1) describing about a good lifestyle.
- (2) describing about a bad lifestyle.
- (3) describing about 'dukka' life.
- (4) describing about suitable and unsuitable practices to enjoy long life.

38. According to the Ayurveda Act of 1961, the medical approaches that come under 'Ayurveda' include

- (1) Indigenous medicine, Siddha medicine and Unani medicine.
- (2) Ayurveda medicine, Unani medicine and Siddha medicine
- (3) Indigenous medicine, Siddha medicine and Ayurveda medicine
- (4) Indigeneous medicine, Siddha medicine, Unani medicine and Ayurveda medicine

● Study the pairs of events *A*, *B*, *C* and *D* and answer questions No. 39 to 40.

A – (i) Prepare *dāna* after understanding the physical status of monks.

(ii) Monks contracting non-communicable diseases.

B – (i) Regularly engaging in waling meditation methods (*sakman bhāwanā*)

(ii) Monks achieving physical and mental well being

C – (i) obtaining vaccination according to medical recommendations and practising good health habits.

(ii) Developing the ability to avoid diseases

D – (i) Acting upon the harfull feelings generated in the mind.

(ii) Ability to engage in good, religious activities.

39. The pairs of events of which, an increase in the first event results in an increase in the second event are,

- (1) *A* and *B* (2) *A* and *D* (3) *B* and *C* (4) *C* and *D*

40. The Pairs of event which, an increase in the first event results in a decrease in the second event is,

- (1) *A* and *C* (2) *A* and *D* (3) *B* and *C* (4) *B* and *D*

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2563 – Mulika Piriven Final Examination – 2019 December
(New Syllabus)

NEW

09 E I, II

(09) Health Science – I, II
Health Science – Paper II

- * This paper consists of **eight** questions.
- * Question No. **one** is compulsory and **four** other questions should be answered.
- * The total number of questions to be answered is **five**.

1. The student monks and students of 'Meth sisila' pirivena organized the Health Day with the theme "Leading a Healthy Life through well-being".

The medical clinic held in the morning was participated by the student monks, other students and devotees. The Body Mass Index (BMI) results showed that the majority of the students were in the green zone of the BMI chart. However, few participants were over-weight or obese. They were given recommendations to minimize the consumption of foods rich in fats, sugar and salt and to engage in exercises regularly as they are at risk of affect non communicable diseases like diabetes. During the elderly clinic, it was evident that some were suffering from eye diseases such as night-blindness. Therefore, they were given medical advice to include green leafy vegetables and fruits to their diet.

In the evening, the chief monk of the pirivena connected a dhamma sermon on the verse 'Ārogyamiccē paramanca lābham', which explained the importance of Buddhism is preserving health. The sermon explained the two-fold practices required to achieve a comfortable life: "sappāya" and "pārisuddhi", and stressed about the factors such as 'Ahara sappāya' and "viharana sappāya" that are important for one's health. Further explanations have been done about the cleanliness of robes (cīvara) and housing (sēnāsana).

The devotees offered natural foods to the participants. At the end of the programme, all participants participated in a Metta Bhavana session and left the piriven premises with a relaxed mind.

Provide short answers to questions from (i) to (x) based on the given incident.

- (i) Mention **two** body measurements that the doctors had used to calculate the BMI.
- (ii) State the colour ranges of the zones in the BMI chart to which, the over weight and obese participants, which are **not** mentioned in the incident.
- (iii) Mention **two** non-communicable diseases that could possible affect the over-weight and obese participants, which are **not** mentioned in the incident.
- (iv) Mention **two** actions other than those mentioned in the incident, which can be taken to prevent the diseased you mentioned above in (iii).
- (v) State **two** eye disorders that are common among elderly, which are not mentioned in the incident.
- (vi) Write **two** activities that the student monks can perform as exercises as per doctors' recommendations.
- (vii) Briefly describe the meaning of the words 'sappāya' and 'pārisuddhiya', which were explained by the chief monk.
- (viii) Mention **two** 'sappāya' that were not mentioned in the incident, that play a huge role in one's health according to Buddhism.
- (ix) State **two** items other than robes (cīvara) and housing (sēnāsana) that should be kept clean in order to preserve 'pārisuddhi'.
- (x) Mention **two** other meditation methods that can be followed by the participants of the Health Day.

(02×10=20 marks)

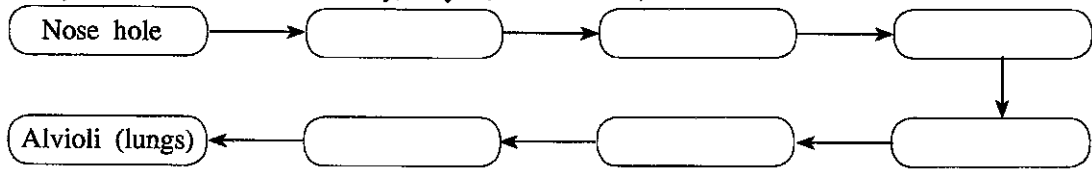
[See page eight.

2. Devotees could not offer 'salāka dhāna' to monks due to a flood situation. Some devotees collected products such as milk products, vegetables, fruits, dry rations and powdered coconut milk packets and handed them over to the temple. During transportation, some fruits and vegetables were bruised and packages of coconut milk powder were damaged. During this period, the monks had to take the responsibility of preparing nutritious meals for "dhāna".

- (i) (a) Of the products received by the monk, mention **two** food items that could become unsuitable for consumption within a short period. (02 marks)
- (b) Mention **two** features other than damages/bruises that can be used to determine whether the items you mentioned above in (i) (a) are unsuitable for consumption. (03 marks)
- (ii) List **three** food items that the monks can choose to prepare meals without destroying their nutritious value. (03 marks)
- (iii) (a) Mention **three** factors that should be considered when selecting foods prepared by the monks, for consumption. (05 marks)
- (b) Mention **two** methods to preserve foods which offered for bhikkhus mentioned in the incident. (05 marks)

- 3. (i) Briefly describe inhalation and exhalation. (02 marks)
- (ii) Copy the following flow chart that shows the pathway of air movement from external environment to lungs, to your answer script. Complete the flow chart using the following words.

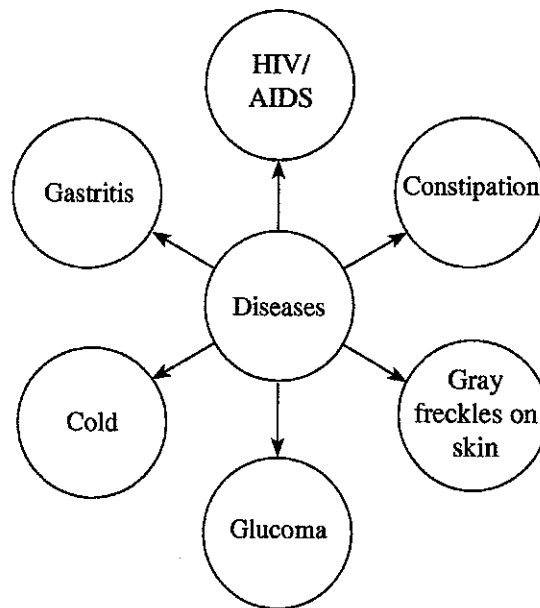
- Pharynx, tracheoles, nasal cavity, larynx, bronchioles, trachea



(03 marks)

- (iii) (a) Write **two** communicable diseases and **two** non communicable diseases related to the respiratory system separately. (05 marks)
- (b) State **three** actions that can be followed to maintain hygiene of the respiratory system. (05 marks)

4.



Use the diagram to answer the following questions.

- (i) Name **two** diseases related to the sensory organs and mention the sensory organ related to each of the **two** diseases you named. (02 marks)

- (ii) Of the diseases indicated in the diagram,
 (a) Name **two** diseases related to the digestive system.
 (b) Mention **one** action that can be taken to prevent each of the two diseases you mentioned above in (ii) (a). (03 marks)
- (iii) (a) Of the diseases indicated in the diagram, what is the disease that can be caused as a result of breaking the 3rd precept?
 (b) Write the causative agent responsible for the diseases you mentioned above in (iii) (a).
 (c) Write three actions can be taken to prevent the spread of the diseases you mentioned above in (iii) (a). (05 marks)
5. (i) Mention **two** ways that can be used to identify polluted water. (02 marks)
 (ii) Mention **three** reasons to show the importance of water inside the body to lead a healthy life. (03 marks)
 (iii) Write **five** methods that can be used to conserve water inside the pirivena. (05 marks)
6. (i) What is meant by '*Ath beheth* (home medicine)' in native firstaid medicine? (02 marks)
 (ii) 'Saving lives' is one major objective of first aid. State the **three** other major objectives of first aid. (03 marks)
 (iii) Explain how you would act as a first aid giver during a cardiac arrest. (05 marks)
7. (i) Briefly explain '*kaya cikitsa*' and '*shalyānga cikitsa*' in Ayurveda? (02 marks)
 (ii) Mention the **six** tastes that are used in Ayurveda to describe the nutrient present in a balance diet. (03 marks)
 (iii) Describe '*panca karma cikitsa*' that are used in Ayurvedic treatments. (05 marks)
8. Causes of mental illness are of two folds: genetic and environmental causes.
 (i) Present **two** family background related problems that can cause mental illness. (02 marks)
 (ii) The Buddhist teachings have prescribed specific '*kamatahan*' for different chracters with mental imbalance. Identify **three** such characters and mention specific '*kamatahan*' prescribed for each of the three characters. (03 marks)
 (iii) (a) Provide **three** advices that you would give to a person suffering from mental tension.
 (b) Briefly explain **three** benefits of meditation with respect to controlling mental tension. (05 marks)

* * *