

**AHSANULLAH UNIVERSITY OF SCIENCE AND TECHNOLOGY****Department of Arts and Sciences****Semester Final Examination of Spring 2017****Program: B. Sc. in Computer Science and Engineering****First Year, First Semester****Course No: HUM 1107, Course Name: Critical Thinking and Communication****Time: 3 hours****Full marks: 70**

Answer the following questions:

(Marks allocated are indicated in the right margin).

**Section I: Critical Thinking****There are 4 (four) questions in this section of the question paper.****Answer any 3 (three) of them.**

1

An inductive argument gives probability, not certainty. Prove this statement with evidence.

10

2

Contradictory statements make a fallacy of inconsistency. Discuss the proposition with an example.

10

3

Identify whether the following sets of statements are arguments or fallacies and explain the reasons.

2.5x4=10

According to a report of the research journal Vital Signs (New York: Norton, 1993) the world fish catch dropped from its 1989 high of 100 million tons to 97 million tons in 1990 and has remained at about that figure ever since. Harvests have increased in some oceans but have fallen in others. And rising catches of some species are offset by falling catches of others. Breaking with a historical trend of constantly growing catches, stagnation in the global catch now appears likely to continue.

b

Jinia is in Mrs. Jones' class now. Mrs. Jones is teaching in her class in the 4<sup>th</sup> floor of the university building. Therefore, Jinia is in the 4<sup>th</sup> floor of the university building.

c

The man in the wheel chair is unable to use even his legs. He is miserable physically, financially and mentally. Therefore, this man cannot be a murderer.

d

Two independent witnesses claimed John committed the murder. John's finger prints are on the murder weapon. John confessed to the crime. So, John committed the murder.

4.

'Critical Thinking and Decision-Making go hand-in-hand'. Discuss the steps for making rational decisions mentioning how critical thinking is required in making rational decisions.

10

## Section II: Communication

There are 6 (six) questions in this section of the question paper.

Answer any 4 (four) of them.

5

Read the following passage and answer the questions that follow:

1x10=10

Chronobiology might sound a little futuristic – like something from a science fiction novel, perhaps – but it's actually a field of study that concerns one of the oldest processes life on this planet has ever known: short-term rhythms of time and their effect on flora and fauna.

This can take many forms. Marine life, for example, is influenced by tidal patterns. Animals tend to be active or inactive depending on the position of the sun or moon. Numerous creatures, humans included, are largely diurnal – that is, they like to come out during the hours of sunlight. Nocturnal animals, such as bats and possums, prefer to forage by night. A third group are known as crepuscular: they thrive in the low-light of dawn and dusk and remain inactive at other hours.

When it comes to humans, chronobiologists are interested in what is known as the circadian rhythm. This is the complete cycle our bodies are naturally geared to undergo within the passage of a twenty-four hour day. Aside from sleeping at night and waking during the day, each cycle involves many other factors such as changes in blood pressure and body temperature. Not everyone has an identical circadian rhythm. 'Night people', for example, often describe how they find it very hard to operate during the morning, but become alert and focused by evening. This is a benign variation within circadian rhythms known as a chronotype.

Scientists have limited abilities to create durable modifications of chronobiological demands. Recent therapeutic developments for humans such as artificial light machines and melatonin administration can reset our circadian rhythms, for example, but our bodies can tell the difference and health suffers when we breach these natural rhythms for extended periods of time. Plants appear no more malleable in this respect; studies demonstrate that vegetables grown in season and ripened on the tree are far higher in essential nutrients than those grown in greenhouses and ripened by laser.

Knowledge of chronobiological patterns can have many pragmatic implications for our day-to-day lives. While contemporary living can sometimes appear to subjugate biology – after all, who needs circadian rhythms when we have caffeine pills, energy drinks, shift work and cities that never sleep? – keeping in sync with our body clock is important.

The average urban resident, for example, rouses at the eye-blearing time of 6.04 a.m., which researchers believe to be far too early. One study found that even rising at 7.00 a.m. has deleterious effects on health unless exercise is performed for 30 minutes afterward. The optimum moment has been whittled down to 7.22 a.m.; muscle aches, headaches and moodiness were reported to be lowest by participants in the study who awoke then.

Once you're up and ready to go, what then? If you're trying to shed some extra pounds, dieticians are adamant: never skip breakfast. This disorients your circadian rhythm and puts your body in starvation mode. The recommended course of action is to follow an intense workout with a carbohydrate-rich breakfast; the other way round and weight loss results are not as pronounced.

Morning is also great for breaking out the vitamins. Supplement absorption by the body is not temporal-dependent, but naturopath Pam Stone notes that the extra boost at breakfast helps us get energised for the day ahead. For improved absorption, Stone suggests pairing supplements with a food in which they are soluble and steering clear of caffeinated beverages. Finally, Stone warns to take care with storage; high potency is best for absorption, and warmth and humidity are known to deplete the potency of a supplement.

After-dinner espressos are becoming more of a tradition – we have the Italians to thank for that – but to prepare for a good night's sleep we are better off putting the brakes on

caffeine consumption as early as 3 p.m. With a seven hour half-life, a cup of coffee containing 90 mg of caffeine taken at this hour could still leave 45 mg of caffeine in your nervous system at ten o'clock that evening. It is essential that, by the time you are ready to sleep, your body is rid of all traces.

Evenings are important for winding down before sleep; however, dietitian Geraldine Georgeou warns that an after-five carbohydrate-fast is more cultural myth than chronobiological demand. This will deprive your body of vital energy needs. Overloading your gut could lead to indigestion, though. Our digestive tracts do not shut down for the night entirely, but their work slows to a crawl as our bodies prepare for sleep. Consuming a modest snack should be entirely sufficient.

**Questions:**

- i. What did researchers identify as the ideal time to wake up in the morning?
- ii. In order to lose weight, what should we do according to the researchers?
- iii. What should a person do for improved absorption of supplement?
- iv. What is the best time to stop drinking coffee?
- v. In the evening what should we not do?
- vi. What is the main aim of the passage?
- vii. What type of vegetables contains more nutrition according to the study?
- viii. Who are the 'Night people' according to the third paragraph of the Passage?
- ix. What do the words, 'their work' mean in the last but one line of the last paragraph of the passage?
- x. What can be a suitable title for the passage?

6  
7 Draft a letter to be published in a newspaper regarding the spread of *chicungunya* in 10 your city and its prevention for raising the awareness of the people.

Write a précis of the passage given below:

Among the manifold misfortunes that may befall humanity, the loss of health is one of the severest. All the joys which life can offer cannot outweigh the sufferings of the sick. Give the sick man everything and leave him suffering and he will feel that half the world is lost to him. Lay him on a soft silken couch; he will nevertheless be under the pressure of his suffering while the miserable beggar, blessed with health, sleeps sweetly on the hard ground. Spread his tables with dainty meats and choice drinks, and he will thrust back the hand that prefers them and envy the poor man who thoroughly enjoys his dry crust. Surround him with pomp of kings; let his chair be a throne, and his crutch a world - swaying scepter; he will look with contemptuous eye on marble, on gold, and on purple, and would deem himself unhappy. He would not be able to enjoy life like the meanest of his healthy servants who live even under the thatched roofs.

10

8

Compose a paragraph on any one of the following topics in about 100 words  
 (maintain the rules of writing including appropriate connectors):

10

- Differences between an Active Student and a Passive Student
- How to Make Paper (Use the flow chart)

Step 1: Gathering the Raw Material	Step 6: "Setting" of Fibers
Step 2: Cleaning the Raw Material	Step 7: Screening
Step 3: Making chips	Step 8: Blotting
Step 4: Digesting	Step 9: Squeezing
Step 5: Beating and Churning	Step 10: Drying and ironing

9

a Answer the following questions: (A, B and C)

5

A. Copy the following text in your answer script making necessary corrections:

A few years ago! Kelin was my student. I teach Western Civilization to her during her freshman year. Since I was an internacional teaching assistant I was aware that I spoke with an accent. I was also awared that my students might have ideas that were very different from mine. Kelin often snicker when I said something she didnt understand. She often asked questions that put me on the spot. All though I was sometimes hurt by her comments, I was always polite to Kelin. Several days ago, I saw Kelin downtown. She approached me and said I learned so much in your class. You was my favorite teacher at the university" It was touch and amaze.

b Turn the following direct questions into polite questions:

2.5

- Where is the airport?
- Where did they come from?
- Do you like to swim?
- Was Palash always late?
- Which doctor did you suggest?

c Fill in the blanks of the following conditional sentences:

2.5

- If I (wake up) \_\_\_\_\_ early, I'll go jogging.
- He (visit) \_\_\_\_\_ his uncle, if he finishes early.
- If she had taken care of her son, he (not/become) \_\_\_\_\_ a criminal.
- If I were a star, I (help) \_\_\_\_\_ the poor.
- She would have been top of her class if she (work) \_\_\_\_\_ hard?

10

Draft a job application in response to the following advertisement which was published in the Daily Star on 10 July 2017:

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#### JOB VACANCY

A reputed IT company is looking for some young, energetic and hardworking individuals for the post of Hardware Engineer for its Head Office in Uttara, Dhaka, Bangladesh. Candidates must have bachelor's degrees from recognised universities, but not be more than 30 years old and should be willing to work under pressure including night shifts. Interested candidates may send applications to the Managing Director, Delta IT Limited, Plot 1, Sector 5, Road 6, Uttara, Dhaka by 30 August 2017.