

Engineer's

**Bangladesh Bank [AD] Written Batch
Final Model Test-01**

পূর্ণমানঃ 200

সময়ঃ 2 ঘণ্টা।

Exam Start@ 10: 00 PM**Stop Writing! @ 12: 00 AM****Last Time of Submission: 12: 15 AM****1. Read the passage and answer the questions (i-vi)****[5*6=30]**

In the near future, space debris will become a critical challenge for the global community, endangering access to space and the benefits this access brings. In recent years, the \$360 billion global space economy has experienced a transformation. Declining costs, satellite and launcher size evolutions and the proliferation of related technology has led to a surge in satellite launches, many of which are conducted by new space enterprises and nations. Over the coming years, thousands of payloads are expected to be launched by the commercial sector alone, adding to the over 2,000 already active satellites in orbit. This transformation and rapid growth are anticipated to increase the space sector's vital role in telecommunications, remote sensing, space science and national security, making it a vital node of the Fourth Industrial Revolution's infrastructure.

However, the rush in space activity is already adding to a crowded orbit. With over 20,000 pieces of debris larger than 10 centimetres tracked in orbit and many more untracked, the rise in space activity will lead to even more debris, increasing collision risk. The orbital environment is a globally shared resource where existing international guidelines steer space actors in their activities, however, these are not enforceable and derived standards are not always followed. Neither are guidelines expected to sufficiently curtail the creation of new debris in the coming years caused by fundamental shifts in traffic. Therefore, an opportunity exists to develop a solution based on a multi stakeholder approach built on public-private collaboration.

As the challenge of orbital debris or "space junk" is set to grow, current and future missions face an increasing risk of possible collisions. The Space Sustainability Rating (SSR) will provide a new, innovative way of addressing the orbital challenge by encouraging responsible behaviour in space through increasing the transparency of organizations' debris mitigation efforts. The SSR will provide a score representing a mission's sustainability as it relates to debris mitigation and alignment with international guidelines. Organizations will provide mission data through a questionnaire, which will be evaluated in combination with other external data through a mathematical model that establishes a rating for the mission. By voluntarily taking part in the rating, spacecraft operators, launch service providers and satellite manufacturers will share a single point of reference externally describing their mission's level of sustainability. Making their aggregate score publicly available, these actors will increase transparency and place emphasis on their debris mitigation approach, without disclosing any mission-sensitive or proprietary information. The rating may also act as a differentiator and trigger positive outcomes (e.g. impacting insurance cost or funding conditions), incentivizing other stakeholders to improve their behavior.

Questions:

- i. What do you understand by 'Space Junk'?
- ii. What are the benefits of the rapid growth in satellite launching?
- iii. What is the threat mentioned in the passage?
- iv. According to the passage what is the need of Space Sustainability Rating?
- v. What is the key lesson from the text?
- vi. Choose a suitable title for the above comprehension.

2. Solve the following problems (i-v)

[6*5=30]

- i. A man borrows Tk. 4000 at 15%, compound rate of interest. At the end of each year he pays back Tk. 1500. How much amount should he pay at the end of the third year to clear all his dues?
- ii. The profit percentage on three articles A, B and C is 10%, 20%, and 25% and the ratio of the cost price is 1 : 2 : 4. Also the ratio of number of articles sold of A, B and C is 2 : 5 : 2, Calculate the overall profit percentage.
- iii. A, B, C started a business with their investments in the ratio 1 : 3 : 5. After 4 months, A invested the same amount as before and B as well as C withdrew half of their investments. What is the ratio of their profits at the end of the year?
- iv. If x is chosen at random from the set {1, 2, 3, 4} and y is to be chosen at random from the set {5, 6, 7}, what is the probability that xy will be even?
- v. A square and an equilateral triangle have equal perimeters. If the diagonal of the square is $12\sqrt{2}$ cm, then what is the area of the triangle?

3. Answer the following questions (i-xv)

[2*15=30]

- i. Bangabandhu Tunnel makes Chattogram 'one city with two towns'. Mention the name of the 'Two Towns'.
- ii. Write down the full forms of NFIS and BFIU.
- iii. Which country is cooperating to implement 'Bangladesh Delta Plan, 2100'? How many hotspots are there in BDP 2100?
- iv. Which Bangladeshi district is bounded by the boundaries of two countries? In which year was 'Chittagong Hill Tracts Peace Accord' signed?
- v. NATO is an intergovernmental military alliance. When was it established? What was the main purpose of NATO?
- vi. How much is value added tax on import and export? How many stock markets are there in Bangladesh?
- vii. When did the journey of mobile financial services (MFS) begin in Bangladesh? Which bank introduced the first agent banking service?
- viii. Which is the highest authority for approving the economic policies and development plans in Bangladesh? What does CDBL stand for?
- ix. In which year World Bank was established? Where is the headquarter of World Bank?
- x. NPSB and BEFTN are two of the transaction platforms in Bangladesh. What are the full forms of NPSB and BEFTN?
- xi. Where will COP-28 be held? Which one is the top country in terms of per capita greenhouse gas emission?
- xii. What do you mean by TRIPS and SDR?
- xiii. How many goals are there in SDG? When will Bangladesh exit from LDC category?
- xiv. How many digital banks have been approved for the initial phase? What are their names?
- xv. Which is the last poem written by Rabindranath Tagore? Name at least two novels written by Rabindranath Tagore.

4. **Translation [English to Bangla]** [10]
Identifying the pitfalls of the social protection system and realising the importance of improving it to meet certain objectives, Bangladesh adopted the National Social Security Strategy (NSSS) in 2015. Thereafter, it was agreed that the recommendations of the National Social Security Strategy will be implemented through medium-term five-year plans and annual economic plans, such as the national budget. The proposal to cover 50-60 percent of vulnerable citizens, increase social protection expenditure to three percent of GDP originate from equity perspective. The government has allocated Tk 126,272 crore, around 7.4 percent more than last year's social protection allocation of Tk 113,576 crore. However, in terms of GDP, the allocation in FY2023-24 is 2.52 percent – which falls short of the National Social Security Strategy target of three percent of GDP which indicates that the social protection system is not keeping pace with development.
5. **Focus Writing in Bangla** [35]
দ্রব্যমূল্যের উর্ধ্বগতি ও মূল্যস্ফীতি নিয়ন্ত্রণে ব্যাংকের ভূমিকা ও করণীয়।
6. **Focus Writing in English** [35]
Digital Banking: A New Era of Financial Inclusion
7. **Argumental Writing in English** [30]
'No Exam Policy' Based New School Curriculum: A great opportunity or a looming disaster

খাতার প্রথম পেইজ এ টপ বরাবর User ID অবশ্যই লিখতে হবে।

User ID: Your Short Name-Last Two Digit of Your Phone Number. Example: Sabbir-34

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খাতা সাবমিশন এর পূর্বে আপনার E-mail এর Subject অংশে ব্যাচ এবং এক্সাম নং সংক্ষেপে যেমনঃ [AD Written: Test-01] অবশ্যই লিখতে হবে। বিশেষ কোন সমস্যা থাকলে **অনধিক ২৪ ঘণ্টা**র মধ্যে পরীক্ষা দেয়া যাবে।