Name:

Enrolment No:

UPES
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UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2019

Course: Financial Economics **Semester: III**
Program: BA Hons. (Energy Economics) **Time: 03 Hours**
Course code: ECON 2002 **Max. Marks: 100**
Instructions:

SECTION -A **(20 Marks)**

		Marks	CO
1	A statistical measure of the degree to which two variables (e.g., securities' returns) move together. A. Coefficient of variation B. Variance C. Covariance D. Certainty equivalent	2	CO 1
2	The put option price is higher when: A) The sticking price is higher than the stock price B) The sticking price is lower than the stock price C) The option period is shorter D) The option period is longer and the strike price is lower	2	CO 1
3	Mr. John invested ₹4000 in gold, which he bought at ₹520 per gram. After two years, he sold them at ₹520 per gram. His annual rate of return from this investment is approximately_____ A) 0.5% B) 3.3% C) 4.4% D) 5.4%	2	CO 2
4	A line describes the relationship between an individual security's return and return on the market portfolio A) Characteristic line B) Security market line C) Capital market line D) beta	2	CO 2
5	An "aggressive" common stock would have a "beta" A) equal to zero B) greater than 1 C) equal to one D) less than one	2	CO 2

6	According to the capital-asset pricing model (CAPM), a security's expected (required) return is equal to the risk-free rate plus a premium A) equal to the security's beta. B) based on the unsystematic risk of the security. C) based on the total risk of the security. D) based on the systematic risk of the security.	**2**	**CO 2**
7	The risk-free security has a beta equal to_____, while market portfolio's beta is equal to_____ A) one; more than one B) one; less than one C) zero; one D) less than zero; more than zero	**2**	**CO 1**
8	An annuity is distinguished from other bonds in that it: A) Never matures B) Pays continuously compounded interest C) Is issued only by the U.S. government D) Will be used to purchase another bond when it matures unless the owner specifies otherwise.	**2**	**CO 1**
9	A sum of ₹2000 deposited today in a bank gets doubled in a period of 6 years. What is the annual rate of interest? A) 11.25% B) 12.25% C) 10% D) 11%	**2**	**CO 3**
10	Which one of the following is not a money market security? A) Treasury bills B) National savings certificate C) Certificates of deposit D) Commercial paper	**2**	**CO 2**
	SECTION-B **Answer any four**		**(20 Marks)**
11	If the current spot price of 10g gold to be ₹7000, the risk free rate to be 10% p.a., and the forward contract period of one year. Explain the arbitrage works for the assumed forward prices of a) ₹8000 and b) ₹7300.		**CO 3**
12	Explain the difference between forward and futures contract.		**CO 2**
13	What is 7-10 formula?		**CO 2**
14	What are the economic benefits of financial markets?		**CO 2**
15	What do you mean by yield to maturity? Explain,		**CO 2**
	SECTION-C **Answer all the questions**		**(30 Marks)**
16	Classify the following items under the appropriate category – Whether Money Market (MM) or Capital Market (CM):	**10**	**CO 2**

<table>
<tr><td></td><td>A. RBI and Government are participants
B. Regulated by SEBI
C. Tenor of instruments is usually less than a year
D. Treasury Bills
E. Commercial Papers
F. Zero Coupon Bonds
G. Equity Shares
H. Debentures</td><td></td><td></td></tr>
<tr><td>17</td><td>A Petrochemical Plant needs to process 20,000 barrels of oil in three months' time. To hedge against the rising price the plants needs to go long on the futures contract of crude oil. The spot price of crude oil is ₹2,925 per barrel, while futures contract expiring three months from now is selling for ₹3,300 per barrel. By going long on the futures the petrochemical plant can lock in the procurement at ₹3,300 per barrel. Assuming the size of one futures contract of 100 barrels, the firm buys 200 futures to cover its exposure of 20,000 barrels. Find out the price that would be payable under two scenarios of rise in price to ₹3,600 or fall in price to ₹2,700 per barrel after three months.</td><td>10</td><td>CO 4</td></tr>
<tr><td>18</td><td>The returns on Stock A and Market Portfolio for a period of 6 years are as follows:
<table>
<tr><th>Year</th><th>Return on A (%) (R_A)</th><th>Return on Market Portfolio (%) (R_M)</th></tr>
<tr><td>1</td><td>10</td><td>8</td></tr>
<tr><td>2</td><td>17</td><td>10</td></tr>
<tr><td>3</td><td>13</td><td>13</td></tr>
<tr><td>4</td><td>2</td><td>-4</td></tr>
<tr><td>5</td><td>10</td><td>11</td></tr>
<tr><td>6</td><td>-10</td><td>-2</td></tr>
</table>
You are required to determine:
i. Characteristic line for Stock A
ii. The systematic and unsystematic risks of stock A</td><td>10</td><td>CO 4</td></tr>
<tr><td colspan="3">SECTION-D
This section is compulsory</td><td>(30 Marks)</td></tr>
<tr><td>19</td><td>Critically analyze the impact of financial markets on economic growth of Indian Economy</td><td>30</td><td>CO 4</td></tr>
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