TEST MEF FACSIMILE

1) The Keynesian multiplier is small when
   a)The income tax rate is high
   b)The interest rate elasticity of investment is high
   c)The import share of national income is high
   d)Government deficit is low

2) In a liquidity trap fiscal policy
   a) Increases the rate of interest
   b) Reduces the rate of interest
   c) Increases output
   d) Does not affect output

3) The natural level of output is
   a) The current level of output
   b) The level consistent with a constant rate of inflation
   c) The level when the unemployment rate is zero
   d) The rate targeted by the Central Bank

4) A surplus in the current account means that
   a) Government spending is greater than tax revenues
   b) Government debt is increasing
   c) Domestic bonds earn a higher interest rate than foreign bonds
   d) The value of exports is larger than the value of imports

5) An appreciation of the currency reduces net exports
   a) Always
   b) Only if a condition on the elasticity of imports and exports with respect to the currency holds
   c) Never
   d) Only if domestic prices fall

6) The effect of a positive demand shock on output is larger
   a) When exchange rates are flexible
   b) The exchange rate regime does not matter
   c) Depends on the characteristics of the demand shock
   d) When exchange rates are fixed

7) A consumer's utility function is U(x,y)=2x+y where x and y are two consumption goods. Let p_x and p_y be the market prices and suppose that $p_x/p_y>2$. What will the consumer's choice be?
   a) the consumer will spend all his/her income for good x
   b) the consumer will spend all his/her income for good y
   c) the consumer will spend one third of his income for x and two thirds for y
   d) the consumer will spend one third of his income for y and two thirds for x

8) Let $12 - \dfrac{1}{2} x = p$ be the inverse demand function of good x and let p be the price of x. The absolute value of the elasticity of x with respect to p evaluated at x=6 is:
   a) 1/2
   b) 2
   c) 3
   d) undetermined

9) Consider a profit maximising firm which hires labour L and capital K as inputs. Inputs are perfect substitutes and the production function is $Y = L + K$ where Y is output. Input prices are given. Suppose that the firm wants to produce a given amount Y of output. How should labour and capital be combined in order to minimise production costs?
   a) only the cheapest input should be acquired
   b) since inputs are complements, the firm's budget should be equally split between the two inputs
   c) inputs should be acquired in amounts such that the marginal productivity per euro spent is equalized between the two inputs
   d) inputs should be acquired in amounts such that the marginal productivity of the two inputs is equalized

10) The Cauchy's problem $y' = y - 1$ with $y(0) = 1$
   a) has a unique solution which is strictly decreasing
   b) has no solutions
   c) has a unique solution which is strictly increasing
   d) has a unique solution which is constant

11) The domain of the function $f(x) = ln\left|\dfrac{x-1}{x+1}\right|$ is
   a) $\mathbb{R}$
   b) $\mathbb{R}\backslash\{-1\}$
   c) $\mathbb{R}\backslash\{+1\}$
   d) $\mathbb{R}\backslash\{-1,+1\}$

12) Let A be a matrix with 3 rows and 3 columns. The linear system Ax=b
   a) has a unique solution
   b) has a unique solution if and only if detA=0
   c) has a unique solution if and only if the rank of the matrix A is 3
   d) has a unique solution if and only if the rank of the matrix (A|b) is 3

13) The point P is stationary for the function f if and only if the gradient of f at P is equal to the vector 0. Let us assume that the Hessian matrix of the function f is negative definite at a stationary point P, then
   a) P is a local minimum point
   b) P is a global minimum point
   c) P is a local maximum point
   d) P is a global maximum point

14) As x goes to 0 the function $f(x)=ln(x+1)/x$
   a) goes to 0
   b) goes to $+\infty$

c) goes to $-\infty$
d) goes to 1

15) Let us consider the integral $\int_{-e^2}^{-e} 1/x \, dx$
a) it does not exist because we cannot take the logarithm of a negative number
b) it does not exists because an area cannot be negative
c) it exists and it is equal to 1
d) it exists and it is equal to -1

16) The confidence intervals at level 0.90 and at level 0.95 are evaluated on a specific sample.
a) The 0.90 interval includes the other one.
b) The 0.95 interval includes the other one.
c) Neither includes the other.
d) It can't be said how the two intervals relate one to the other.

17) The qualitative variable X='Hair color' takes the following four values: Black=1, Brown=2, Red=3, Blonde=4. The regression of earnings on X is run to check whether hair color makes a difference. The coefficient on X turns out to be not statistically significant at any conventional level.
a) Hair color does not have any effect on earnings.
b) Ok, the effect is not statistically significant but this is only because a finer color classification should be used.
c) The regression is meaningless: a qualitative variable can't be specified this way as an explanatory variable.
d) Fine, but to confirm this result the regression should be run changing the coding of the colors (i.e. Black=2, Brown=4….).

18) The sampling variances of two different estimators, both unbiased for the parameter of interest, are 10 and 8. When applied to a specific sample they yield estimates as large as 3.2 e 5.7, respectively. The true value of the parameter is closer to 5.7 than to 3.2.
a) Yes
b) Who knows?
c) Yes but only if the sample is drawn from a Gaussian distribution.
d) No, it is closer to 3.2.

19) In the true regression of Y on the explanatory variables X and Z both regression coefficients are positive. Moreover, the correlation between Z and X is positive. The regression is mistakenly run omitting Z from the list of explanatory variables.
a) As a result, the estimate of the coefficient on X isStill unbiased
b) Upward biased
c) Downward biased
d) Biased but nothing can be said on the sign of the bias.

20) In an hypothesis testing problem the level of the test is 0.10. As applied to a specific sample the null hypothesis turns out as *not rejected*. A reader of this result argues that the level of the test is too high for the result to be credible and suggests reducing it to 0.05.
a) Yes, the reader is right: changing the level of the test to 0.05 might change the result.
b) No, the reader is wrong. No need to try at the level 0.05: if the null is not rejected at the level 0.1 it is *a fortiori* not rejected at the level 0.05.
c) No, the reader is wrong. No need to try at the level 0.05: if the null is not rejected at the level 0.1 it is rejected *for sure* at the level 0.05.
d) The reader is right but reducing the level of the test to 0.05 is not enough: much better to reduce it to 0.01.

21) In the regression of Y on the explanatory variables X and Z an interaction term involving the two explanatory variables is added.
a) It is included because otherwise the coefficient on X would not be the effect of X on Y keeping Z fixed.
b) It is included to allow the effect of X on Y to depend on Z .
c) It is included to improve the results in case X and Z are collinear.
d) It is included to improve the results in case the disturbance term is heteroschedastic.

22) Volatility risk of a single asset is usually measured by which of the following?
a) Standard deviation.
b) Variance.
c) Correlation.
d) Covariance.

23) If an asset has zero beta, then it can be described in which of the following ways?
a) It is very risky.
b) It is risk free.
c) It is riskier than the market portfolio.
d) It has the same risk as the market portfolio.

24) If a share return is higher than is justified by the share's beta, then which of the following will restore market equilibrium?
a) Fall in the share's price, rise in share return.
b) Rise in the share's price, fall in share return.
c) Fall in the share's price, fall in share return.
d) Rise in the share's price, rise in share return.

25) Which of the following defines free cash flow?
a) After-tax operating income + depreciation + interest - capital expenditures - change in net working capital.
b) Gross profit + depreciation + interest - capital expenditures - change in net working capital.
c) Net profit + depreciation + interest - capital expenditures - change in net working capital.
d) After-tax operating income + tax shield + depreciation + interest - capital expenditures - change in net working capital.

26) What is the tax shield?
a) The tax shield is a benefit which accrues to companies which are able to channel their funds through tax havens.

b) The tax shield is the benefit which accrues to firms which are located in special enterprise areas.
c) ==The tax shield is the phenomenon whereby allowable expenses such as interest and depreciation reduce taxable profit.==
d) The tax shield allows initial capital expenditure to be offset against tax, when calculating taxable profit.

27) Which of the following is true for leveraged beta?
a) Leveraged beta represents fundamental operational risk.
b) Leveraged beta represents financial risk from leverage.
c) ==Leveraged beta represents fundamental operational risk plus financial risk from leverage.==
d) Leveraged beta represents fundamental operational risk minus financial risk from leverage.

28) The ROS – *Return on Sale* is calculated as:
a) Net income/Shareholder equity
b) ==Operating profit margin/Total Sales==
c) EBITDA/Total Sales
d) External profit margin/Total Sales

29) An allowance for warranty repairs of items sold should be accounted as:
a) Increase in equity
b) Long term assets
c) Extraordinary costs
d) ==Operating costs==

30) Firms' stakeholders are:
a) The main investors of the firm
b) The most relevant individuals able to influence firm's results
c) ==Persons, groups or organizations that have interests or concerns in the firm==
d) The holders of the most relevant stakes in the board of directors