Index Number: _____ IM32.A.18s A

IL-BORD TAL-MATRIKOLA U
TAĊ-ĊERTIFIKAT TAL-EDUKAZZJONI SEKONDARJA
MATRICULATION AND SECONDARY EDUCATION CERTIFICATE
EXAMINATIONS BOARD

LIVELL INTERMEDJU TAL-MATRIKOLA
INTERMEDIATE MATRICULATION LEVEL
IT-TIENI SESSJONI 2018/2018 SECOND SESSION

SUBJECT / SUĠĠETT:	**Systems Of Knowledge / L-Oqsma Tal-Għerf**
DATE / DATA:	3rd September 2018 / it-3 ta' Settembru 2018
TIME / ĦIN:	4:00 p.m. to 7:05 p.m. / mill-4:00 p.m. sas-7:05 p.m.

You should have **FOUR** write-on scripts – **ONE** for each section. You may answer either in English or Maltese. Each question carries 25 marks.

*Għandu jkollok **ERBA'** skripts fejn tikteb għal dan l-eżami – **WIEĦED** għal kull taqsima. Tista' twieġeb kemm bl-Ingliż kif ukoll bil-Malti. Kull mistoqsija fiha 25 marka.*

SECTION A: Answer ONE question from this section.
TAQSIMA A: Wieġeb mistoqsija WAĦDA minn din it-taqsima.

A1 "Fake news" was not a term many people used 18 months ago, but it is now seen as one of the greatest threats to democracy, free debate and the Western order. As well as being a favourite term of Donald Trump, it has been named the phrase of the year, raised tensions between nations, and may lead to the regulation of social media.

(The Telegraph November 14th 2017)

Discuss the implications of 'fake news' on modern democracies. In your answer consider the following questions: How much can you trust the media? Do you think that it is possible to get to the truth? How can one evaluate the claims that the media makes? Should social media be regulated and should news items be vetted and checked for their 'truth' value? Give reasons for your answers.

A1 Sa 18 –il xahar ilu t-Terminu "aħbarijiet foloz" ma kienx użat minn ħafna nies. Iżda issa huwa meqjus bħala wieħed mill-akbar theddida għad-demokrazija, għad-dibattitu liberu u l-ordni fil-Punent. Apparti li huwa terminu favorit ta' Donald Trump, qed jissejjaħ bħala l-frażi tas-sena u qajjem tensjonijiet bejn in-nazzjonijiet, u jista' jwassal biex il-midja soċjali tigi rregolarizzata. *(The Telegraph tal-14 ta' Novembru 2017)*

Iddiskuti l-implikazzjonijiet ta' 'aħbarijiet foloz' fuq demokraziji moderni. Fit-tweġiba tiegħek ikkunsidra dawn id-domandi: Kemm tista' tafdaha lill-midja? Taħseb li huwa possibbli li tasal għall-verità? Kif tista' tevalwa l-pretensjonijiet li l-midja tagħmel? Il-midja soċjali għandha tkun regolarizzata u l-punti tal-aħbarijiet għandhom jiġu eżaminati u ċċekkjati għall-valur tal-verità tagħhom? Agħti r-raġunijiet għat-tweġibiet tiegħek.

A2 Define and explain the term 'globalisation'. Using **THREE** examples, explain how globalisation has affected Malta and its citizens positively in recent years. Using **THREE** examples, explain how globalisation has affected Malta and its citizens negatively in recent years. How has globalisation affected the world's poorest countries?

*A2 Iddefinixxi u spjega t-terminu "globalizzazzjoni". Permezz ta' **TLIET** eżempji, spjega kif il-globalizzazzjoni affettwat b'mod pożittiv lil Malta u liċ-ċittadini tagħha f'dawn l-aħħar snin. Permezz ta' **TLIET** eżempji, spjega kif il-globalizzazzjoni affettwat b'mod negattiv lil Malta u liċ-ċittadini tagħha f'dawn l-aħħar snin. Kif il-globalizzazzjoni affettwat l-ifqar pajjiżi tad-dinja?*

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Index Number: _____ IM32.B.18s **B**

IL-BORD TAL-MATRIKOLA U
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MATRICULATION AND SECONDARY EDUCATION CERTIFICATE
EXAMINATIONS BOARD

L-Università ta' Malta

LIVELL INTERMEDJU TAL-MATRIKOLA
INTERMEDIATE MATRICULATION LEVEL
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*Għandu jkollok **ERBA'** skripts fejn tikteb għal dan l-eżami – **WIEĦED** għal kull taqsima. Tista' twieġeb kemm bl-Ingliż kif ukoll bil-Malti. Kull mistoqsija fiha 25 marka.*

SECTION B: Answer ONE question from this section.
TAQSIMA B: Wieġeb mistoqsija WAĦDA minn din it-taqsima.

B1 Pablo Picasso completed his painting 'Guernica' in 1937 to recall the death and destruction caused by the carpet bombing of the town of Guernica in the Basque region during the Spanish Civil War (1936-1939).

Evaluate and explore how art can be used as a means of teaching and remembering important historical events. Use **TWO** other works of art to show how art has been used to memorialise history and to draw lessons from it.

B1 Pablo Picasso lesta l-pittura tiegħu 'Guernica' fl-1937 biex ifakkar il-mewt u l-qerda kkawżati mill-bumbardament tal-belt ta' Guernica fir-reġjun ta' Basque matul il-Gwerra Ċivili Spanjola (1936-1939).

*Evalwa u esplora kif l-arti tista' tintuża bħala mezz ta' tagħlim u sabiex jigu mfakkra avvenimenti storiċi ta' importanza. Uża **ŻEWĠ** xogħlijiet artistici oħra, biex turi kif l-arti ntużat biex tikkommemora l-istorja u biex jittieħdu lezzjonijiet minnha.*

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B2 Valletta has been designated the European Capital of Culture for 2018. Although Valletta is a predominantly Baroque city with buildings like Auberge de Castille and St John's Co-Cathedral, it also houses more contemporary structures like the new parliamentary building by Renzo Piano. Whereas the older Baroque buildings symbolise a period of a foreign nobility ruling over Malta like a feudal state, the new parliamentary building symbolises the democratic values of contemporary Malta as an independent, sovereign state.

Discuss and evaluate how works of art or architecture can express the political structures or realities of a state. Use **TWO** examples, either from Malta or from other countries, excluding the ones mentioned in the question, to further support your argument and claims.

B2 Il-Belt Valletta ġiet nominata l-Belt Kapitali Ewropea tal-Kultura għas-sena 2018. Għalkemm il-Belt hija belt predominanti Barokka, b'binijiet bħall-Berġa ta' Kastilja u l-Konkatidral ta' San Ġwann, fiha wkoll strutturi aktar kontemporanji bħall-bini ġdid tal-parlament ta' Renzo Piano. Filwaqt li l-bini Barokk antik jissimbolizza perjodu ta' ħakma ta' nobbiltà barranija fuq Malta bħala stat fewdali, il-bini parlamentari ġdid jissimbolizza l-valuri demokratiċi ta' Malta kontemporanja bħala stat indipendenti u sovran.

*Iddiskuti u evalwa kif xogħlijiet ta' arti jew arkitettura jistgħu jesprimu l-istrutturi politiċi jew ir-realtajiet ta' stat. Uża **ŻEWĠ** eżempji minn Malta jew minn pajjiżi oħra, minbarra dawk imsemmija fil-mistoqsija, biex issostni aktar l-argumenti u l-fehmiet tiegħek.*

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Index Number: _____ IM32.C.18s C

IL-BORD TAL-MATRIKOLA U
TAĊ-ĊERTIFIKAT TAL-EDUKAZZJONI SEKONDARJA
MATRICULATION AND SECONDARY EDUCATION CERTIFICATE
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SECTION C: Answer ONE question from this section.
TAQSIMA C: Wieġeb mistoqsija WAĦDA minn din it-taqsima.

C1 In 1947, in the midst of controversy over the role of scientists in the creation of the atom bomb, physicist and Nobel laureate Percy Bridgman argued,

> The challenge to the understanding of nature is a challenge to the utmost capacity in us. In accepting the challenge, man can dare to accept no handicaps. That is the reason that scientific freedom is essential and that the artificial limitations of tools or subject matter are unthinkable.
>
> *Bridgman, P. W. (1947). Scientists and social responsibility. The Scientific Monthly, 65(2), 153.*

Here Dr Bridgman is claiming that science is so valuable to society that, in pursuing it, scientists should be free from the constraints of moral or social responsibility. In this way, scientists have no obligation to consider the potential consequences of their work outside science.

a) Explain how science addresses "the challenge to the understanding of nature".
b) Identify **TWO** "handicaps" which could obstruct or limit the successful pursuit of this challenge; and explain your choice.
c) Discuss, using **TWO** examples, the potential consequences of scientific work on society, highlighting how such scientific work could impact on society's ethical and moral principles.

C1 Fl-1947, f'nofs kontroversja dwar l-irwol tax-xjenzati fil-ħolqien tal-bombi atomiċi, il-fiżiċist u r-rebbieħ tal-premju Nobel Percy Bridgman argumenta li,

> *L-isfida għall-fehim tan-natura hija l-akbar waħda għall-kapaċitajiet tagħna. Meta wieħed jaċċetta l-isfida, il-bniedem jista' jazzarda li jaċċetta l-ebda ostaklu. Dik hija r-raġuni l-għaliex il-libertà xjentifika hija essenzjali u li l-limitazzjonijiet artifiċjali tal-għodod jew tas-suġġett huma inkonċepibbli.*
>
> *Bridgman, P. W. (1947). Scientists and social responsibility. The Scientific Monthly, 65(2), 153.*

Hawnhekk Dr Bridgman isostni li x-xjenza hija tant ta' valur għas-soċjetà li biex isegwuha, ix-xjentisti għandhom ikunu ħielsa mil-limitazzjonijiet tar-responsabbiltà morali jew soċjali. B'dan il-mod, ix-xjentisti m'għandhom l-ebda obbligu li jikkunsidraw il-konsegwenzi tax-xogħol tagħhom barra x-xjenza.

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a) Spjega kif ix-xjenza tindirizza "l-isfida għall-fehim tan-natura".
*b) Identifika **ŻEWĠ** "ostakli" li jistgħu jostakolaw jew jillimitaw is-suċċess fl-insegwiment ta' din l-isfida; u spjega l-għażla tiegħek.*
*c) Iddiskuti, bl-użu ta' **ŻEWĠ** eżempji, il-konsegwenzi li jistgħu jinħolqu mix-xogħol xjentifiku fuq is-soċjetà, b'enfażi fuq kif dan ix-xogħol jista' jkollu impatt fuq il-prinċipji etiċi u morali tas-soċjetà.*

C2 "The study of the scientific method is the attempt to discern the activities by which [the] success [of science] is achieved. Among the activities often identified as characteristic of science are: systematic observation and experimentation, inductive and deductive reasoning, and the formation and testing of hypotheses and theories."

The Stanford Encyclopedia of Philosophy (2016)

a) What is the scientific method?
b) Discuss the role of method in science.
c) Give **ONE** example of inductive reasoning and **ONE** example of deductive reasoning in science.
d) From the history of science, give **ONE** example of a hypothesis and how this hypothesis has been tested.
e) Suggest a hypothesis based on current observations, and propose how this might be tested scientifically.

C2 "L-istudju tal-metodu xjentifiku huwa l-attentat biex jirrikonoxxu l-attivitajiet li permezz tagħhom jinkiseb is-suċċess [tax-xjenza]. Fost l-attivitajiet li spiss huma identifikati bħala karatteristika tax-xjenza nsibu: l-osservazzjoni sistematika u l-esperimentazzjoni, ir-raġunament induttiv u deduttiv, u l-formazzjoni u l-ittestjar tal-ipoteżijiet u t-teoriji.

"The Stanford Encyclopedia of Philosophy (2016)

a) X'inhu l-metodu xjentifiku?
b) Iddiskuti l-irwol tal-metodu fix-xjenza.
*c) Agħti eżempju **WIEĦED** ta' raġunament induttiv u eżempju **WIEĦED** ta' raġunament deduttiv fix-xjenza.*
*d) Mill-istorja tax-xjenza, agħti eżempju **WIEĦED** ta' ipoteżi u kif din l-ipoteżi ġiet ittestjata.*
e) Issuġġerixxi ipoteżi bbażata fuq l-osservazzjonijiet attwali, u għid kif dan jista' jiġi ttestjat xjentifikament.

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Index Number: _____ IM32.D.18s **D**

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SECTION D: Answer ONE question from this section.
TAQSIMA D: Wieġeb mistoqsija WAĦDA minn din it-taqsima.

D1 The Maltese archipelago's large-scale urbanisation and high population density are impacting its biodiversity and the quality of its aquifers, as well as creating unprecedented land degradation and waste management issues.

For each of the above-mentioned environment-related factors, give **ONE** example to show how these are conditioned by urbanisation and demographic growth within a small land area. Reflect on how urbanisation and demographic growth are dependent on values and how these values affect the attitudes adopted.

D1 L-urbanizzazzjoni fuq skala kbira tal-arċipelagu Malti u d-densità tal-popolazzjoni għolja qed jaffettwaw il-bijodiversità u l-kwalità tal-akwiferi tagħha, kif ukoll toħloq kwistjonijiet ta' degradazzjoni tal-art u l-ġestjoni tal-iskart bla preċedent.

*Għal kull wieħed mill-fatturi relatati mal-ambjent imsemmija hawn fuq, agħti eżempju **WIEĦED** li juri kif dawn huma kkundizzjonati mill-urbanizzazzjoni u mit-tkabbir demografiku f'żona żgħira ta' art. Irrifletti dwar kif l-urbanizzazzjoni u t-tkabbir demografiku jiddependu fuq il-valuri u kif dawn il-valuri jaffettwaw l-attitudnijiet addottati.*

D2 In Malta, economic growth and prosperity are commonly perceived as indicators of a rising standard of living. Explain the difference between the consequence of this economic activity on the human and the natural environment. Provide and comment on **TWO** examples (one positive and one negative) for each of the following:

i. The influence of economic growth and prosperity on the quality of the human environment;
ii. The influence of economic growth and prosperity on the quality of the natural environment.

*D2 F'Malta, it-tkabbir ekonomiku u l-prosperità huma normalment meqjusa bħala indikaturi ta' livell ta' għajxien li dejjem jiżdied. Spjega d-differenza bejn il-konsegwenza ta' din l-attività ekonomika fuq l-ambjent tal-bniedem u dak naturali. Semmi u kkummenta fuq **ŻEWĠ** eżempji (wieħed pożittiv u wieħed negattiv) għal kull wieħed minn dawn li ġejjin:*

i. L-influwenza tat-tkabbir ekonomiku u l-prosperità fuq il-kwalità tal-ambjent tal-bniedem;
ii. L-influwenza tat-tkabbir ekonomiku u l-prosperità fuq il-kwalità tal-ambjent naturali.

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