TP Assessment
International Education

TP Local A and B

VIDEO ANALYSIS **0102/01**

Paper 1 Applications of Common Sense **October 2023**

MARK SCHEME

Maximum Marks: 100

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

TP International will not enter into discussions about these mark schemes. TP International is publishing the mark schemes for the October 2023 series for most TP Local and B components.

This document has **5** pages.

Generic Marking Principles

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:

- The specific content of the mark scheme or the generic level descriptors for the question
- The specific skills defined in the mark scheme or in the generic level descriptors for the question
- The standard of response required by a candidate as exemplified by standardisation scripts

GENERIC MARKING PRINCIPLE 2:

Marks awarded are always whole marks (not half marks, or other fractions).

GENERIC MARKING PRINCIPLE 3:

Marks must be awarded positively/negatively:

- Marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- Marks are awarded when candidates clearly demonstrate what they know and can do
- Marks **are** deducted for errors
- Marks **are** deducted for omissions
- Answers should be judged on the quality of spelling, punctuation and grammar. The meaning should be unambiguous.

GENERIC MARKING PRINCIPLE 4:

Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

GENERIC MARKING PRINCIPLE 5:

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

GENERIC MARKING PRINCIPLE 6:

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

Video Analysis-Specific Marking Principles

1 Examiners should consider the context and scientific use of any keywords when awarding marks. Although keywords may be present, marks should not be awarded if the keywords are used incorrectly.

2 The examiner should not choose between contradictory statements given in the same question part, and credit should not be awarded for any correct statement that is contradicted within the same question part. Wrong calculations that are irrelevant to the question should be ignored.

3 Spellings have to be correct, spellings of syllabus terms must allow for clear and unambiguous separation from other syllabus terms with which they may be confused.

4 'List rule' guidance

For questions that require n responses (e.g. listing facts for discussions):

- The response should be read as continuous prose, even when numbered answer spaces are provided.
- Any response marked ignore in the mark scheme should not count towards n.
- Incorrect responses should not be awarded credit but will still count towards n.
- Read the entire response to check for any responses that contradict those that would otherwise be credited. Credit should not be awarded for any responses that are contradicted within the rest of the response. Where two responses contradict one another, this should be treated as a single incorrect response.
- Non-contradictory responses after the first n responses may be ignored even if they include incorrect terminology.

5 Calculation specific guidance
Correct answers to calculations should be given full credit even if there is no working or incorrect working, unless the question states 'show your working'.

For questions in which the number of significant figures required is not stated, credit should be awarded for correct answers when rounded by the examiner to the number of significant figures given in the mark scheme. This may not apply to measured values.

For answers given in standard form (e.g. a ´ 10n) in which the convention of restricting the value of the coefficient (a) to a value between 1 and 10 is not followed, credit may still be awarded if the answer can be converted to the answer given in the mark scheme.

Unless a separate mark is given for a unit, a missing or incorrect unit will normally mean that the final calculation mark is not awarded. Exceptions to this general principle will be noted in the mark scheme.

Mark categories

F marks	Marks allocated to the format being recognised and adhered to appropriately.
S marks	Marks allocated towards maintaining legible, organised paragraphs in the response.
A marks	Marks involved in the accuracy of finding correct data and using it suitably.
T marks	Marks given when past knowledge is applied to deduce the steps to carry out.
M marks	Marks given upon identifying a correct method to proceed with the task.
C marks	These are calculation marks which are awarded for carrying out calculations involved in a method.

Question	Answer	Marks
1		

Subjective Marks	Type
• Sophisticated analysis of elements of format and structure. • Sophisticated analysis composing of several (justifiable) arguments against the validity of the cosplay.	25F:25S
• Detailed analysis of elements of format and structure. • Detailed analysis composing of several arguments against the validity of the cosplay.	20F:20S
• Clear analysis of elements of format and structure. • Clear analysis composing of many arguments against the validity of the cosplay.	15F:15S
• Limited analysis of elements of format and structure. • Limited analysis composing of some arguments against the validity of the cosplay.	10F:10S
• Minimal analysis of elements of format and structure. • Minimal analysis composing of little to no arguments against the validity of the cosplay.	5F:5S
• No creditable response	0F:0S

Objective Marks	Type
Identifies the problem with Nezuko being in sunlight.	T1
Argues about Nezuko's lack of will to fight back against Zenitsu.	T1
Questions the characters being cosplayed next to Nezuko.	T1
Proceeding to elaborate on differences of characters from the different anime worlds.	T1
Questions where Tanjiro is, elaborating on how his absence and failing to protect his sister is a very inaccurate depiction.	T1
Using stopwatch to find the amount of time it takes for Zenitsu to run towards Nezuko.	M1
Finding the time as around 4 seconds (when he collides with Jenga).	C1
Suggesting the use of maps to find the location and record the distance between the initial and crashing point.	M1
Finding thickness of Jenga block and counting number of Jengas stacked, then using editing to find number of blocks between initial and crashing position. Or Approximating width of lawn chair and using that to find the distance between initial and crashing position.	M1
Approximating the distance as 3-4 meters.	C1
Using $s = \frac{1}{2}(u+v)t$ to find v.	C1
v = 2s/t = 2(3 [or 4])/4 = 1.5 or 2 m/s	C1
Argue that Zenitsu can reach up to 50 m/s, especially for something that he values a lot, so it is unrealistic that he would run towards Nezuko at low speeds. Or If argued that he is being gentle and approachable by running slowly, also mention that he is being set up for failure yet another time.	T1
Use of sun's position to predict the time of day.	M1
Find the angle of deviation produced by observable shadows.	M1
Use trigonometry, with approximate length of objects to find angle.	M1
The lengths are taken from the position of the lady to the edge of the table and from that edge to the point at which the shadow overlaps with the perimeter.	M1
Using Jenga block widths and lengths to help measure the distance, with help of editing.	M1
Jenga block dimensions: Width – 2.5 cm Length – 7.5 cm Height – 1.5 cm	C1
Distance from lady to table edge = 2 Jenga lengths = 15cm	C1
Distance from edge to shadow overlap = 2 Jenga lengths = 15cm	C1
Angle = arctan(15/15) = 45 degrees	C1
Length of shadow same as that of object.	T1
Determination of location by checking source of video	T1
Search internet for a match in any of the people who appeared.	M1
Check 'About' tab and look at the country section.	M1
Channel is WholeWheatPete.	M1
Watch more videos to pinpoint the location.	A1
The location is United States, specifically NYC (video title includes @Anime NYC 2022)	M1
State that due to location there are no exceptions to sun rising as observed in north pole or equator.	T1
Sun rises at around 6AM and sets around 8:30PM, 14 hours and 30 minutes available.	C1
Number of minutes available = (60 x 14)+30 = 870 minutes	C1
Deduce (1/4)x870 and (3/4)x870 as morning and evening 45 degree angles.	C1
Morning angle gives 217.5 minutes (divide by 60 and take remainder) – 3h37min30s.	C1
Add 3h37minutes to 6AM to get 9:37 AM.	C1
Afternoon angle gives 652.5 minutes (divide by 60 and take remainder) – 10h52min30s.	C1
Add 10h52 minutes to 6AM to get 4:52 PM.	C1
Deduce that the evening angle is a better estimate.	T1
Support Nezuko being in broad daylight **and** question Sailor Moon's ability to protect her.	T1
Question Sailor Moon being a man.	T1
Momentum of Zenitsu can be calculated.	M1

		Assuming it is an ideal roleplay, Zenitsu's mass is 58kg.		A1
		Momentum = Mass x Velocity = 58 x (1.5 or 2) = 87 to 116 Ns		C1
		Record time Zenitsu spends recovering from collision as 1.7s.		A1
		Force = Rate of change of Momentum = 87 (or 116)/1.7 = 51.2 (68.2) N		C1
		Zenitsu can travel at great speeds with immense control.		T1
		Since he can fly when using Thunder breathing, he can withstand a force of several magnitudes.		T1
		Assuming he accelerates at 50 m/s^2 at his fastest, that is a force of 2900N.		C1
		The ratio is 2900:60, a force around 50 times greater than the Jenga collision.		C1
		Hence, he should have immediately recovered from the crash.		T1